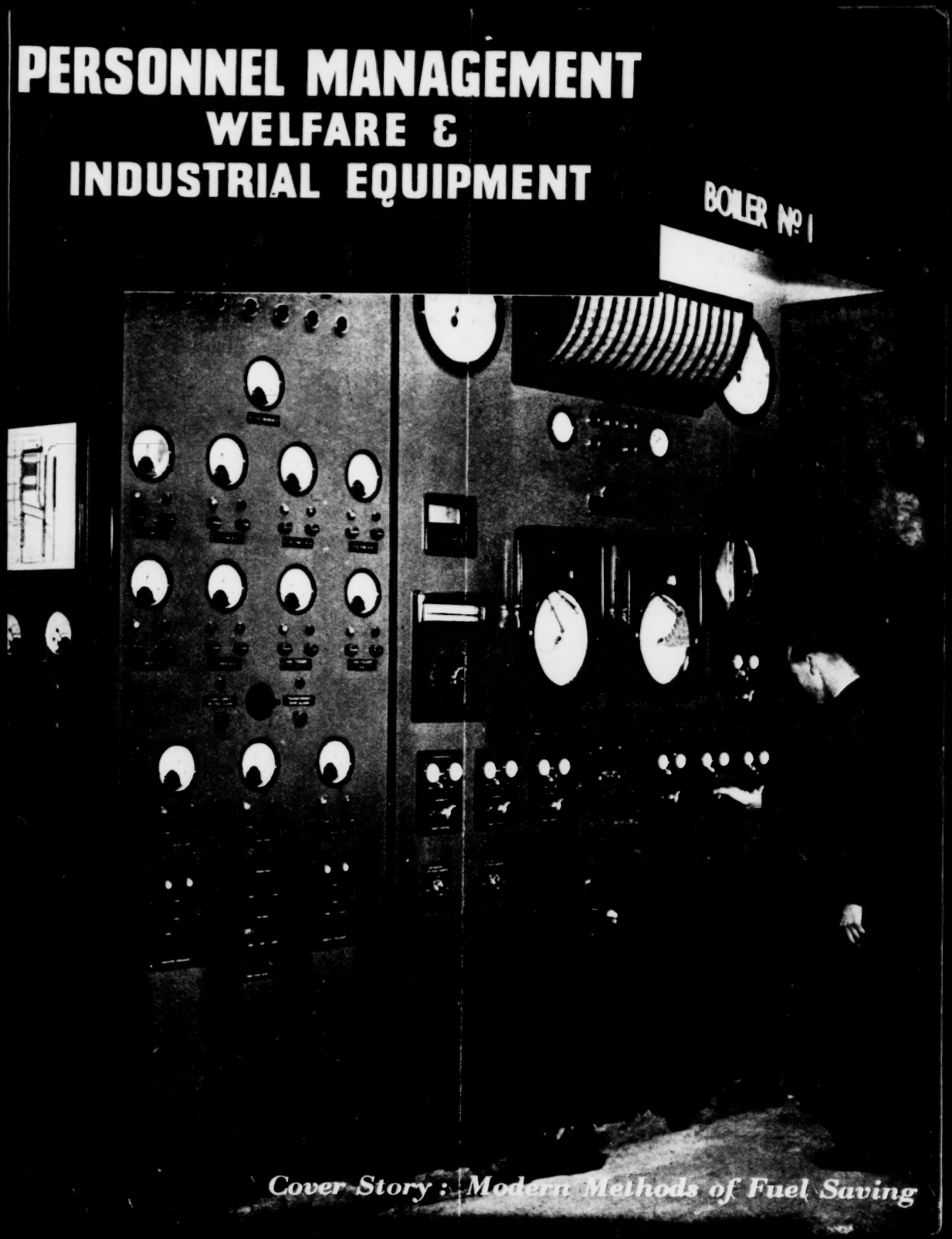
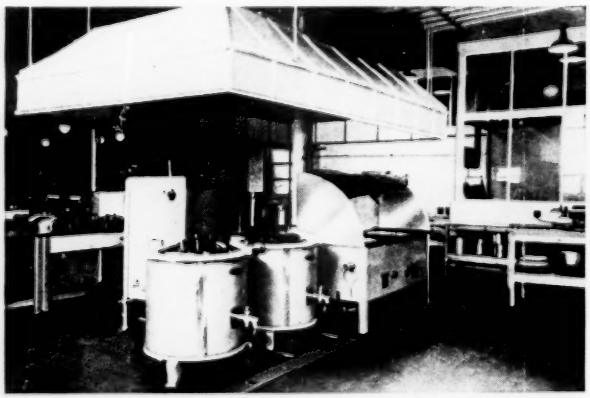
PERSONNEL MANAGEMENT
WELFARE & INDUSTRIAL EQUIPMENT



Cover Story : Modern Methods of Fuel Saving

GIVE UP SMOKING? I NEVER STARTED! says Mr. Therm

Gas burnt in Mr. Therm's gas-heated appliances never produces the slightest smut or smoke. It is so clean in operation that gas equipment is kept hard at it with complete success in many places where almost surgical cleanliness is essential; and the maintenance of the equipment is confined to an easily handled minimum. The other advantages of gas as a fuel—flexibility, ease of control, rapid heating from cold and high efficiency—are so well known that Mr. Therm's face is familiar in factories all over Britain.



Here is gas doing a real job, with scrupulous cleanliness, in the industrial canteen of Joshua Hoyle & Sons Ltd., Rochdale. The equipment comprises fish frying range, steaming oven, cooking range, two 20-gallon boiling pans, dish washing machine and the usual labour-saving devices. The kitchen serves about 250 two-course lunches in 10 minutes each day.

MR. THERM BURNS TO SERVE YOU!

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The main cause of lost time in industry, according to the Medical Research Council, is sickness absence. Much of this absenteeism can be traced to the transmission of contagious ailments through the use of communal towels. After washing, hands should be dried on a clean, fresh, fluff-free paper towel—an immaculate towel like Hi-Dri, designed to be used once, then thrown away!

ROLLER TOWELS MEAN WAITING and CONGESTION
Lost Man Hours—Transmission of Germs—Expensive Laundry Bills

MOISTURE MAGNET!
Hi-Dri towels absorb every drop of moisture. Will not disintegrate when wet.

DISPENSER CABINETS SUPPLIED FREE ON LOAN

Hi-Dri
PAPER TOWELS

WITHOUT OBLIGATION

Write or phone today for details or ask for a demonstration of Hi-Dri paper towels and further proof that they can help you cut absenteeism!

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Here's a new smartness to speed up production.
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Here's something which you as a progressive industrialist can't afford to be without.
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Yes, if you use Chinabrite. You can proudly claim that your high-class meals are eaten off scientifically clean crockery with equally safe cutlery. Forks present the greatest menace and even they are made chemically clean with Chinabrite—the highly efficient and economical detergent for hand and machine washing-up. Write for further details.

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STEROKLENE. A strong Detergent specially graded for cleaning beer engines and pipe lines.

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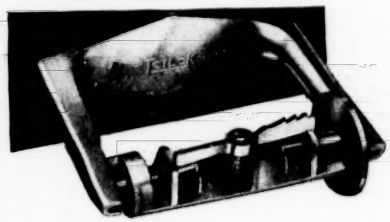

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Complete including P.-T. **22/-**

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Over 600 Toiloks were purchased and installed by the Festival of Britain Authorities.

To have rolls that won't stop rolling and that litter the floors with soiled toilet paper is as bad as giving a blank cheque for waste. Fit these new Toilok fixtures and save up to 60%.
Toilok releases only one piece at a time.
It prevents wasteful unrollings; unhygienic fouling of the paper and completely baulks the petty thief.
The few shillings it costs comes back in no time and with regular savings to follow.

TOILOK
REGD TRADE MARK
TOILET ROLL HOLDER
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OUR TOILET ROLLS are also available. Medicated, 7 oz. tightly wound, soluble tissue. The "TOILOK" Holder, however, takes all good Toilet Rolls. Special quotations for bulk orders, please send for specimen and price.

The sheet tears easily but does not unroll, thus preventing wastage

The roll swings backwards far enough to release another sheet

The toilet roll cannot be removed, but remains free to revolve

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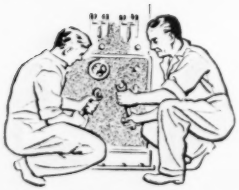
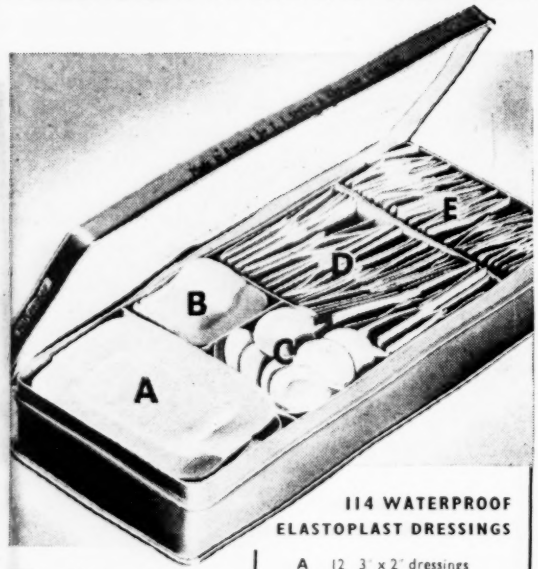
BRIGGS INDUSTRIAL FOOTWEAR LTD.
17-23 DOVER STREET, LEICESTER



These Waterproof Elastoplast dressings keep workers' cuts dry as they work in oil, water and grease.

THIS OUTFIT HELPS OUTPUT



114 WATERPROOF ELASTOPLAST DRESSINGS

A	12	3" x 2" dressings
B	12	1½" x 1½" dressings
C	18	Patchettes
D	36	2½" x 1" dressings
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REFILLS: *Unit packs contain* **12**, 3" x 2" *dressings,* **36** *dressings in each of the other sizes and also* **36**, 3" x 1" *dressings.*

This Medical & Factory First Aid Outfit . . . contains 114 waterproof dressings made to the Elastoplast standard of quality. No water, grease, oil or dirt gets through or under these dressings. Put this tin in your First Aid Room and keep it replenished with Unit Packs of refill dressings. Then your workers who report with minor cuts and grazes can be swiftly treated and allowed to return to their jobs—however wet, dirty or oily the conditions. Waterproof Elastoplast keeps cuts dry and saves man-hours for the firm. *Order the Medical and Factory First Aid Outfit from your wholesaler or write direct to the makers.*

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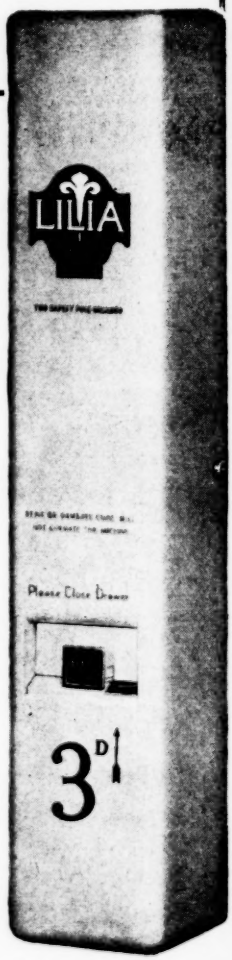
LILIA

SANITARY TOWEL VENDING MACHINE

PROMPT DELIVERY IS OFFERED



Welfare Officers in the most up-to-date factories are installing the 'Lilia' Vending Machine in women's cloakrooms. Women employees find it so useful to buy emergency supplies of 'Lilia' by this method. It saves endless embarrassment and inconvenience.

The all-metal machine illustrated — which can be fixed in a few minutes by any mechanic — is of streamlined design with permanent white enamelled finish. It holds 20 cartons each containing one Lilia soluble towel.

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Lilia are the towels that are comfortable as well as soluble. They feel soft to the touch—they stay soft in wear.

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Measurements: Height 35 inches. Width 6½ inches. Back to front 6 inches.

LILIA Towels 30/- per gross nett carriage paid, minimum 2 gross.

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you can prevent loss through soilage of garments, materials and food . . .
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Protective & First-Aid Dressings

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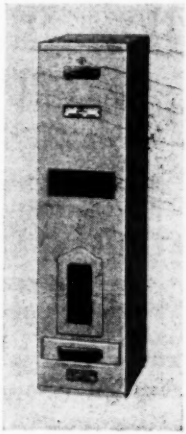

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★ **it *sterilises* as it cleans**

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Wasn't it Napoleon who said . . . .

"An Army Marches on its Stomach?"

And today more than ever industrialists are realising that the well fed and contented operative in the great human army of industry will produce more.

This fact being well recognised means that more and more concerns both great and small are providing Canteen services for their staffs. For economical running these must be well designed and equipped.

We have had over 50 years' experience in Kitchen Equipment design and Kitchen layout.

Our units are made in different capacities to suit all sizes of installation. The equipment is of first-class quality, finished in cream or mottled grey vitreous enamel, chromium plate and stainless steel. Our technical staff are available to advise you without obligation.

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The G.V.D. SYSTEM treats lighting as a means to an end, namely, to enable you to see your surroundings perfectly, and not just to see how much money you can be persuaded to spend on fittings, bulbs and electricity.

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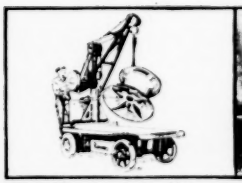
1 ton Truck with fixed platform.

make the

Forklift 20 handling forgings.

2 ton Truck with elevating platform.

Truck for



Crane Truck—carries 1½ tons Lifts ½ ton loads.

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Let our Technical Representative advise you on your interior transport problems.

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"AUTOMACHECKIT" duplicate check machines provide an effective control of both food and cash. They are also suitable for the sale of drinks dispensed in the lounge.

See this and other systems of cash control demonstrated at our Stand No. 230 in the gallery at the Hotel & Restaurant & Catering Exhibition, Olympia, London. Jan. 23rd — Feb. 1st, 1952.

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SINGLE OR DOUBLE-SIDED, HORIZONTAL OR SEMI-VERTICAL. For Indoor and Outdoor use.

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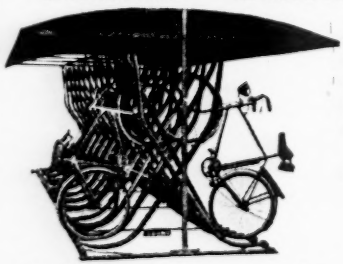

DOUBLE SIDED SEMI-VERTICAL OUTDOOR STAND, BUILT WITH CLOSE RACK ARRANGEMENT (CYCLES AT 12" CENTRES)

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In order to gain space at Offley Road to cope with our ever-increasing output we have moved our sales organisation to Wardour Street. ALL SALES ENQUIRIES should now be addressed to:

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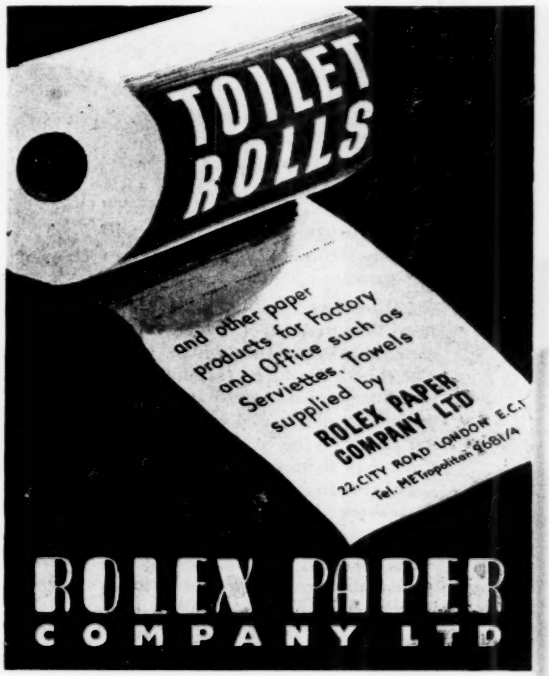
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"IT IS BETTER TO GIVE . . ."

Although this issue of PERSONNEL MANAGEMENT, WELFARE AND INDUSTRIAL EQUIPMENT is dated January, 1952, it will actually be published just before Christmas.

It therefore seems appropriate to draw the attention of readers to the charitable appeals on this page and elsewhere in the Journal. The Christmas spirit is traditionally expressed in giving, and who are more entitled to receive our gifts than those less fortunate than ourselves—either through sickness or ill-luck, or because their duties cause them to be away from home?

May we ask you, in the midst of your festivities, to remember those who really need your help?

Please send a Christmas Gift to the

IMPERIAL CANCER RESEARCH FUND

Patron: His Most Gracious Majesty The King

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The fund was founded in 1902 under the direction of the Royal College of Physicians of London and the Royal College of Surgeons of England. It is a centre for research and information on Cancer and carries on continuous and systematic investigations in up-to-date laboratories at Mill Hill.

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PERSONNEL MANAGEMENT WELFARE AND INDUSTRIAL EQUIPMENT

CONTENTS FOR JANUARY, 1952

MANAGEMENT OF PERSONNEL

HOW TO GET, TRAIN AND KEEP LABOUR ... ... *WINIFRED GODE* 293

INDUSTRIAL EQUIPMENT AND MANAGEMENT

FUEL EFFICIENCY IMPROVES OUTPUT ... ... *A FUEL TECHNOLOGIST* 291
THE COST OF HAND DRYING ... ... *JOHN SPENCE* 295
EQUIPMENT THAT RAISES OUTPUT: Lighting ★ Health ★ Security ★ Maintenance ★ Heating ★ Handling ★ Compressed Air ★ Welfare ★ Fire Fighting 309

WELFARE, TRAINING AND HEALTH

THE FINGERS OF THE BLIND ARE PRODUCTIVE ... *PAUL NUGAT* 296

SAFETY AND ACCIDENT PREVENTION—CIVIL DEFENCE

A SERVICE TO INDUSTRY ... ... *SIDNEY L. HARFORD, Secretary, Institute of Civil Defence* 300
RESCUE COURSE FOR INDUSTRIAL INSTRUCTORS 300
THE INDUSTRIAL NURSE HELPS SAFETY ... ... *MARGARET G. GOOLSBY, Sister-in-Charge, H. J. Heinz & Co. Ltd.* 301

CANTEENS AND CATERING

NEW EQUIPMENT AT THE EXHIBITION 305

NEWS AND READERS' SERVICE

CURRENT PERSONNEL AND PRODUCTION PRACTICE DIGEST 298
PERSONNEL NEWS BULLETIN 302
SUMMARY OF OFFICIAL PUBLICATIONS 313

COVER: A boiler control panel in the Staythorpe power station of British Electricity Authority (East Midlands Division). A special article on fuel efficiency and its benefits for management and worker appears on page 291.

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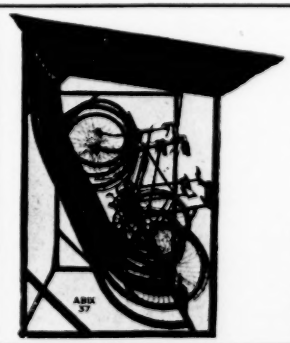

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OLYMPIA, JAN. 23—Feb. 1

Alert management realises the vital role played by an efficient boiler house. In fact, some claim that productivity begins in the boiler house. Here—in the first of two high policy articles—an expert outlines the four main benefits conferred by efficient use of fuel in industry.

Efficient Use of Fuel Lowers Costs, Improves Output

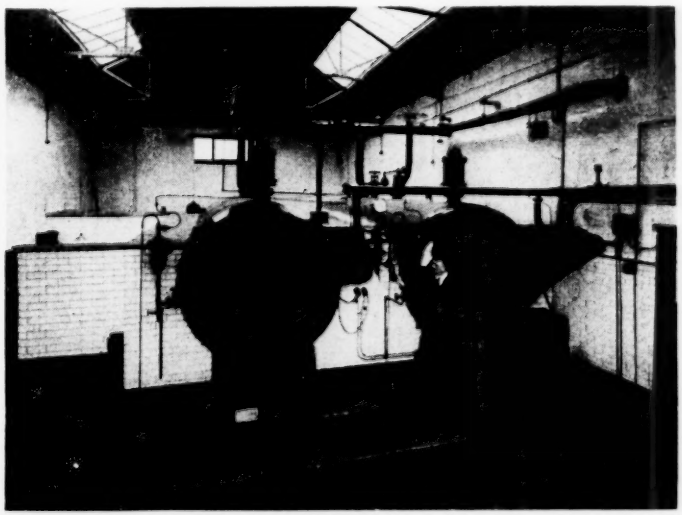
By A FUEL TECHNOLOGIST

FUEL efficiency can be an irritating expression—suggestive, as it is, of the closely related expression fuel economy. Let us for a change forget fuel economy as a primary aim, a negative one in most of its aspects, and think rather of the more positive and constructive aims of fuel efficiency. What can fuel efficiency offer to industry that is worth consideration?

Most obviously, there is the sure prospect of cash savings if, alternatively, the same amount of work can be done with less fuel, or more work can be done with the same amount of fuel. In some industries such savings may be important in themselves; in others, where fuel costs are small in relation to total costs, possible savings may be so small as to appear negligible as an incentive to fuel efficiency. But there are other incentives. Fuel efficiency tends to promote better working conditions in boiler hours and process shop alike, to secure more uniformity of product, and to reduce liability to interruptions of production through mechanical or power failure. Some or all of these benefits are to be expected from any well-planned scheme of fuel efficiency.

A very simple factual illustration will show some of these benefits. In a small one-man boiler-house run by a local authority in Scotland to provide for baths and a public washhouse the weekly consumption of coal was about 16 tons. After two or three days' practical tutelage of the fireman by an experienced stoker demonstrator, weekly consumption was reduced to about 10 tons—and kept at that—without any reduction in the steam and heat supplied. Thus, about 300 tons of coal a year was released for use elsewhere; about £600 or £700 was saved in running costs; over one-third of the back-bending labour of the fireman was eliminated; his job was made cleaner by about the same degree; the likelihood of smoke and grit emission (largely the results of bad firing) was much reduced. Indeed, "a better time was had by all."

This little case history illustrates many of the advantages accruing from the more efficient use of fuel—savings in the material itself, in cash



Boiler firing is not just a matter of shovel and brawn. Contrast the picture above with that on the right, which shows underfeed stokers applied to Cornish boilers. Coal is mechanically fed in from below the fire, and burned smokelessly. The boiler house is clean and tidy; so is the fireman.

(Photograph by courtesy of Riley Stoker Co. Ltd.

and in labour, and an improvement in amenity.

Another important factor—one which commands attention in these days of fuel and power shortages—is that a concerted effort to save fuel, to make it go further, offers one of the best means of insuring industry against loss of output through lack of coal or gas or electricity. Sir Andrew Bryan, a member of the National Coal Board and one of the foremost mining experts of the country, recently pointed out that in 1950 the net value of the output of our coal mines was just one-thirtieth of the total product of Great Britain, which is mostly in directly manufactured goods or services. He went on: "It is only because the coal is got in the first place that the other twenty-nine-thirtieths of the national product can exist at all. A ton of coal may cost 45s. at the pithead, but it is needed to produce fully £60 worth of other goods."

Industry's Life Blood

Our national economy, like an inverted pyramid, is balanced upon a relatively small but essential peak of coal. A wastage of 300 tons—roughly the output of one miner in a year—means a loss of potential goods and services worth ultimately about £20,000, of which quite a lot would represent wages and salaries.

Coal is, in fact, the life blood of almost all industry, if not in fact of almost all civilised life. It is reasonable, therefore, to begin with an examination of what we do with it, and as coal is by far the most important fuel we have in this country, whether used directly as coal or indirectly as coke, gas or electricity, we may first examine the steam in which so much of it is used.

In the vast majority of small industries the boiler house is to a large extent relegated to the position of being a necessary appendage to supply steam or power, or both. The supply is there to be drawn off as required. When the boiler plant is meeting the demand everybody is satisfied. But what proportion of the "customers" in the factory or works gives it a thought in the ordinary course of affairs? Twenty-five per cent, 10 per cent, 5 per cent or even less? For that matter, what proportion of those at management level give the boiler plant continued thought among their other managerial cares and problems?

Pursue the thought down to the men who really count in this matter, perhaps just the one man who counts—the boiler operator, the boiler fireman or simply the stoker. Call him what you will, it is the stoker on whose knowledge and skill so much throughout the industry depends. This issue of PERSONNEL MANAGEMENT & INDUSTRIAL EQUIPMENT contains illustrations of boiler-house layout. The photograph on the cover is that of one of the many highly organised and efficient power stations in the country. As is often prescribed by the photographic artist, there is a human touch in the picture—the boiler operator. His efficiency depends to a large extent on his seeing that the generous supply of instruments and control mechanisms illustrated is working properly. Intelligent interpretation of the readings given by the instruments takes the place of shovel and brawn, whose use is so vividly shown in another of the pictures given here—that of a fireman or stoker of the orthodox type. The contrast between these two pictures provides the text for our sermon.

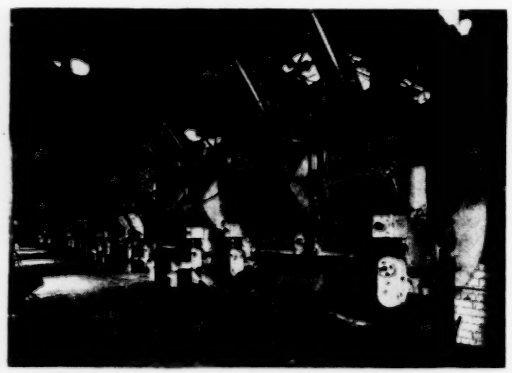
WHAT EFFICIENT FUEL BURNING CAN DO

1. **Save fuel — and therefore money.**
2. **Give a more consistent product.**
3. **Reduce the risk of breaks in production.**
4. **Result in better working conditions in boilerhouse and shops.**

"A ton of coal may cost 45s. at the pithead, but it is needed to produce fully £60 worth of other goods."

Thousands of boilers are still operated in this country by hand-firing. Their efficiency is a matter for wide divergence of opinion, but on one point most people concerned agree; efficient operation of a hand-fired boiler is a matter for using the services of a highly intelligent skilled operator. Boiler stoking is sometimes described, perhaps generally thought of, as an arduous and on the whole dirty occupation, requiring brawn rather than intelligence—a job for the odd man for whom no other work requiring intelligence or technical ability can be conveniently found. Nothing could be further from the truth. Efficient boiler firing requires knowledge and intelligence; it can be interesting, it can even be made comparatively easy and it should be possible for it to be a comparatively clean job. It should, at least, be possible for it to be done in comparative comfort.

The Advisory Services of the Ministry of Fuel and Power provide a reservoir of knowledge and experience which may be freely drawn upon by the industrialist who is faced with a specific problem in his use of heat and power, or who, in a general way, seeks to ensure that he is making the best use of these resources. But there is much that can be done without outside help. In a succeeding article, therefore, an endeavour will be made to give appropriate guidance of value to operatives and managements alike as to how the problem should be approached and of ways in which, with their own resources, they may achieve their end.



Eleven out of twenty-two pairs of mechanical stokers which are saving a considerable amount of fuel in the works of a famous textile manufacturer.

[Photograph by courtesy of Edwin Danks and Co. (Oldbury) Ltd.

Personnel policy of T. Wall & Sons Ltd., food product manufacturers, is summed up in the phrase, "A Job with Wall's means a career at Wall's."

Labour—How to

- Get it
- Train it
- Keep it

By WINIFRED GODE

MAJOR management problem at Wall's, who today employ over 6,000 people, is labour—how to get it, how to train it, how to keep it. The company's expansion has been rapid, and over the past three or four years the labour force has been nearly trebled. This constant demand for labour has also brought with it a demand for more supervisory and managerial staff, and to meet this the firm have adopted a policy of promotion from within and undertaken the training of their own staff to ensure that such vacancies are adequately filled.

Thomas, grandson of the founder, Richard Wall, not only established the firm as one of the largest food manufacturing concerns in Britain, but played a leading part in the adult education movement in this country, founding the £200,000 Thomas Wall Trust for the further education of young people at university and technical college.

Following in this tradition, the firm have a comprehensive education policy which not only embraces vocational training, but also leisure-time study. They refund class and examination fees upon the satisfactory conclusion of ordinary courses of commercial or technical studies, and give an additional grant of £20 if the candidate is successful in securing a university degree or other professional qualification. Leave, up to one day a week, without loss of pay, is granted to those attending part-time courses for university degrees or higher technical examinations, or for vocational studies of immediate application to their duties in the firm. In exceptional cases, where an employee-student shows considerable promise, the firm enable him to continue his studies at a university. Wall's may also nominate suitable employees to attend refresher courses sponsored by various authorities, providing such courses have a bearing on the firm's activities

Where an employee has any special knowledge or skill he is encouraged to put it to good use as an instructor in youth club work, discussion groups, evening classes, or the like, for Wall's believe that their employees can and should contribute to the service of the community.

Wall's set up their personnel department in the mid-thirties. It was first known as the employment bureau, becoming the personnel department in 1937. When ice-cream production was resumed in 1945 and the business rapidly expanded, this expansion was reflected in the development of the personnel department. During last summer, plans for a national personnel organisation were formulated, and Mr. J. M. Bridges was appointed company personnel manager, responsible to a member of the board for the entire personnel function in the Wall's organisation. Wall's recognise that an efficient personnel department is the foundation of an efficient business.

A job with Wall's means more than just a job; it offers a career. Each individual employee—whether director or operative—is a member of the Wall's organisation with a recognised responsibility to increase food production for the greater prosperity of the country, the company, and himself. Not only are staff given every opportunity to become proficient at their jobs, but through formal or informal joint consultation, every effort is made to take advantage of the contribution each one may make to the common aim.

The provision of welfare and social amenities, the responsibility of the personnel department, has always been considered of prime importance. These include canteens, and a medical department which in addition to routine first-aid services, provides heat treatment and chiropody. "Music While You Work" is relayed

Most popular spot on Friday afternoons is the staff shop where employees can buy the company's food products.

ANALYSIS OF THE PERSONNEL FUNCTION

STAFF	LEGAL	EDUCATION and TRAINING	LABOUR RELATIONS	WELFARE AND ACCIDENT PREVENTION		MEDICAL and FIRST AID
Recruitment Selection Placing Military Service Transfers Dismissals Discipline	Factory Acts Hours of Work Working Conditions Meal and Rest Breaks Lighting Shop Acts Disabled Persons National Insurance Industrial Injuries Reinstatement Trade Unions	Further Education Company's Schemes T.W.I. Induction Schemes Vocational Training	Salary and Wage Structure Job Evaluation Labour Contracts Trade Unions Employers' Organisations Pensions Schemes Joint Consultations Statistics Organisation and Methods House Purchase Scheme Communications: Information Magazine	Recreation: Sports and Social Entertainments Outings Camps Factory Music Holidays Library Canteen: Catering Diets Tea Breaks Services: Transport: Hygiene Social (local) Factory Tours Accommodation Visitors Outside Contacts	Material: Mechanical Guards Protective Clothing Psychological: Education Posters Good Housekeeping Safety Weeks Safety Committees Savings: Hospital Savings Savings Bank National Savings Benefit Schemes Sickness and Industrial Injury Benefit Comforts Fund	Curative: Family Doctor Rehabilitation Preventative: Factory Clinics Examinations Mass X-ray Factory Hygiene Working Conditions Accidents First Aid

This chart reflects the development of Wall's personnel department which has taken place since 1945, when ice-cream production was resumed. The department is now responsible to the board for the personnel function in all the company's branches.

throughout the factories, and is even extended to long-distance transport drivers by means of radio sets installed in the driving cabs, which helps to relieve the monotony of long journeys. Drivers who have an accident-free year, and they are greatly in the majority, receive a special bonus.

All employees who complete 15 years' service with the company receive a good service award in the form of a gold watch. Women employees who marry after 4 years' service or more are given a wedding present of National Savings certificates. Expectant mothers also receive a grant on leaving the company; they are then considered as being on unpaid leave and may return to their employment when they wish.

Two Pension Funds

There are two pension funds for employees. The employee pays a share and the company pays the rest. The union superannuation fund is open to management, supervisory, technical and clerical grades and to sales representatives. The union pension fund provides for the male factory staff. Both funds guarantee an old-age pension, and if an employee dies before retirement his widow or dependant receives a pension. Should an employee die while in the service of the company, his widow or next of kin also receives the equivalent of four weeks' salary in addition to the pension.

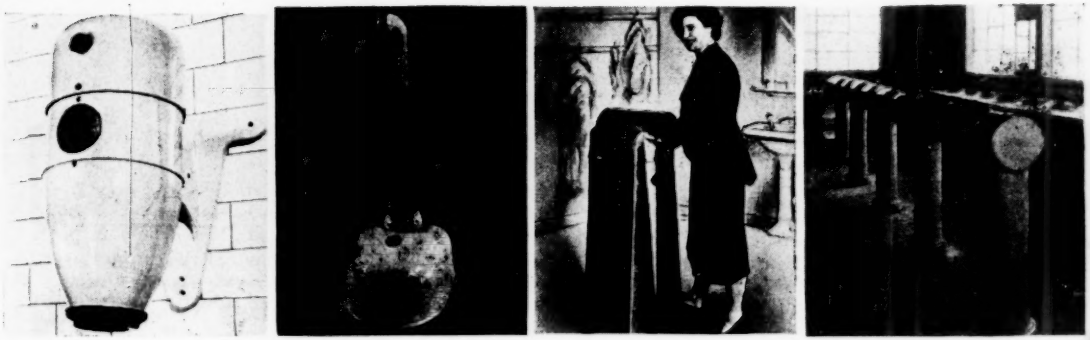
A comprehensive benefits scheme covers employees absent through sickness or industrial injury. After a year's employment with the company, normal salary or wages, less National Insurance or Industrial Injuries benefits, are paid according to length of service. Employees with less than five years' service receive full pay for thirteen weeks, while those with five years' but less than ten years' service receive full pay for thirteen weeks, and two-thirds normal pay for a further thirteen weeks. After twenty-five years' service, an employee is entitled to full pay for fifty-two weeks and two-thirds pay for twenty-six weeks. Any period for which an employee receives benefit during the twelve months preceding a claim is reckoned against his entitlement.

In approved cases, the company will also help employees to buy their own houses by granting a loan (not more than one-third of the valuation) of that portion of the purchase price which is above the amount that can be covered by mortgage arrangements.

In a firm producing food for public consumption, the health and cleanliness of the workers are of vital importance. Every employee is medically examined upon entry, and even the slightest scratch or cut must be reported to the medical department. Every facility is provided to keep employees in good health, but should they need rest and recuperation after an illness they may be sent to the convalescent home at Llandudno, entirely at the firm's expense. Strict instructions are issued to employees on the matter of personal cleanliness, especially in the care of the hands, and protective clothing is supplied and laundered free of charge.

Good wages and conditions, opportunity for promotion, security for the future, provision of medical, welfare and social amenities—these are some of the ways in which Wall's are attracting and maintaining an adequate labour force in the face of a steadily increasing demand for their products—and for labour.

Wall's make a great point of personal cleanliness—especially care of the hands—on the part of their employees. Witness this girl filling bulk containers with ice-cream.



Four hot-air driers, including a wall-mounting type (left) and a multiple unit (right). To get the best out of these driers, the hands should be rinsed thoroughly, surface water shaken off, and the washing motion continued in the hot-air stream for up to 30 seconds.

The Cost of Hand Drying

By JOHN SPENCE

Annual costs for hand-drying facilities are frequently higher than is realised, and a review of their relative merits and costs should be undertaken periodically.

THE three types of equipment available are fabric towels, paper towels, and hot-air driers: there are also variations of each type.

1. *Fabric Towels.*—For a really satisfactory drying, I like a fabric towel. It mops up the water, and if the face wants drying it is effective and quick. But it has to be taken to the factory and there must be storage for it when it is not required. Where central washing and locker rooms are available, this can be fairly easily provided; but when there are also washing facilities in the shops or plants, difficulties arise. Additional lockers may be required.

Roller towels do not stay clean for long and cannot, therefore, be recommended for mass use. Individual towels would have to be issued.

It is necessary to allow for the replacement—because of loss or damage—of at least two towels per employee per year. If they are washed at a laundry the washing cost is easy to ascertain. A figure should also be allowed for distribution and collection of clean and dirty towels: if they are not checked in and out, losses will become excessive. Assuming that a minute is spent by the serviceman and user each time a towel is changed, and with labour at, say, 2s. 6d. an hour, an additional 1d. per towel should be allowed. Where dirty work has to be done, a towel will not remain clean for a week, and the cost will be increased accordingly.

2. *Paper Towels* are available in two forms—as individual towels or in a continuous strip. Generally, individual towels are used and dispensed from cabinets which can hold several hundred towels. Paper towels, used correctly, dry the hands properly. The first towel is used to pat the hands and absorb the major amount of moisture; a second towel is used to finish the drying process. It is, in my experience, more economical to use the individual towel than the continuous roll. Pilferage is generally not an important item but it has sometimes to be considered. The other minor difficulty is the education of the worker into habits of tidiness with the used towels. Containers should be provided into which these can be thrown. Service charges are confined to refilling the dispensers (weekly) and emptying the containers.

Here the cost calculation is simple. Two paper towels are required each time a person dries his hands. If the hands are washed four times a day in a five-day week, 2,000 towels are required per year for each employee.

3. *Hot-air Driers.*—The basic principle of all hot-air driers is that cold air is blown over an element which heats it and the hands are held in the warm air current. Generally, hot-air driers are in individual units but there is at least one multiple unit model. This is controlled by a selenium cell which starts the drier whenever a

WHAT THE LAW REQUIRES

Drying facilities have to be provided and maintained in a clean condition in accordance with Section 42 of the Factories Act of 1937, which reads "(1) There shall be provided and maintained for the use of employed persons adequate and suitable facilities for washing, which shall include soap and clean towels or other suitable means of cleaning or drying, and the facilities shall be conveniently accessible and shall be kept in a clean and orderly condition."

It has been held that providing a workman with one or two new towels each year and expecting him to wash them regularly is not compliance with the law.

hand is inserted in one of the openings. It is expensive, but where there is a heavy user area it can prove economical. One of the complaints with hot-air driers is that they leave the hands feeling too dry. This is invariably due to the hands not being properly rinsed, and being dried with a thin soap scum still left on them. In one of the newer models an attempt to overcome this difficulty has been made by the fitting of an oil pad reservoir over the position where the hands are held. The hot air causes the oil to vaporise and a faint oil mist is deposited on the hands. To ensure quick drying the hands should be rubbed together all the time they are in the hot-air blast. Before drying, they should be thoroughly rinsed, and all surface water shaken off.

Hot Air Costs

It is often alleged that hot-air driers are slow; but in a recent test on a drier which had been in use for some years it took less than thirty seconds to dry my hands. There are, of course, no servicing charges with hot-air driers.

Cost of operation? Here is an example: If one allows twenty men per drier, and that seventy-five men can dry their hands for one unit of electricity, the cost is as follows:

Depreciation at 10 per cent per annum on an installed cost of £40 per machine—£4 depreciation per man at 10 per cent per annum ...	4s. 0d.
Maintenance at 5 per cent	2s. 0d.
Electricity, say, 10 units at 2.5d. per unit ...	2s. 1d.
Cost per man per year	8s. 1d.

"Industry Needs More Safety Officers"

SPEAKING on "The Human Factor in Accident Prevention" at Birmingham recently, Professor T. V. Matthew stated that more specially appointed factory safety officers were needed. *It was estimated that there were fewer than* 500 *in the whole of British industry.*

Professor Matthew said the loss to the nation from accidents in mining, manufacturing and building was about £150,000,000 a year: £15 for each worker. This could only be reduced if safety engineering were taken seriously as a "high-level occupation requiring special training and skill."

The Fingers of the Blind are Productive—in the Right Jobs

By PAUL NUGAT

Properly trained, blind workers can compete on level terms with sighted workers. They are single-minded, do not need extra supervision and are less liable to accidents. This article tells how they can be trained and assesses their value to management facing the continuing problem of manpower shortage.

IN the last six years, the representatives of the blind and the partially blind have made a frontal attack on commerce and industry. Approximately 2,000 blind people have been placed in jobs alongside sighted workers.

Sponsored jointly by the Ministry of Labour, the National Institute for the Blind, and St. Dunstan's, the policy behind this "frontal attack" has two main aims:

(a) Because blindness is highest among industrial workers, to get an afflicted employee reinstated in his old occupation or failing this, to find him alternative employment within the same firm.

(b) To find productive employment for any blind person who, in the course of rehabilitation, shows an aptitude to succeed in industry or commerce—previous experience or no.

The loss of an employee's sight is a contingency which may present itself to any employer. Within the last few years, it has occurred twice among the personnel of Standard Telephones and Cables Ltd., at their New Southgate factory. The first casualty was a time-study engineer and ratefixer who, over many years with the company, had acquired a thorough knowledge of its manufacturing methods and piece-rating systems. This knowledge stands him in good stead today in the training section of the personnel department where, since he was blinded, he interviews and selects junior applicants, and generally supervises close upon 200 trainees.

In talking to him one understands how his supreme confidence in his own abilities has gained the respect of his colleagues. When, therefore, a clerk in the shipping department lost his sight and, like the blinded ratefixer, was sent to the National Institute for the Blind for rehabilitation, the blind member of the personnel department offered his services temporarily on the dial assembly benches as a trainee, so that the supervisors in that section might accustom themselves to teaching a blind employee to do a particular job. In due course, the former clerk returned and made good as a manual worker on dial assembly. Later, he learned to operate a toggle press in the machine shop, where he is now one of the most successful piece-workers.

Two other blind workers employed on capstan lathes at this factory are doing excellent work.

Broadly speaking, where safety regulations are scrupulously observed, no additional safety measures, such as guards, are necessary. A non-sighted worker will have been taught during his training to recognise "safety lanes" so as to avoid the risk of coming into contact with the dangerous areas of the machine he is going to operate. The

The blind can equal the sighted on machine operation. Here is a blind trainee at Letchworth College receiving instruction on a lathe.

This precision instrument inspector is using a Braille micrometer. Because of their highly developed sense of touch, the blind make excellent inspectors.

experience of the World Moulded Metal Co., when they were in production at Romford and employed a very large force of blind workers, was that their accident rate on machines was zero and, therefore, lower than for their sighted employees. The explanation of this, given by Mr. Mitchell-Maer, an American pioneer in the employment of the blind, was that unlike sighted workers "*the risk of their attempting to deviate from the sequence of operations, thereby involving themselves in hazards which the sighted operator consciously or unconsciously takes, is much smaller.*"

No Extra Supervision

This viewpoint is confirmed by other employers and by the discontinuation of a special fund, set up in the United States and Canada, to cover—as it proved to be, unnecessarily—the additional legal risk arising out of the engagement of blind workers in unsheltered industries. Indeed, one standard by which the suitability of any particular machine job can be judged is that it should require no specially designed protective equipment to make it suitable.

Extra supervision of blind workers is another precaution which industry generally has found to be unnecessary. The unlimited fund of goodwill of sighted workers for their less fortunate colleagues takes care of the routine of getting to and from the cloak-room, canteen, etc. Some firms in the radio industry have had to provide extra supervision. The cost has been less than was first estimated, and the productivity of their blind workers of an order to justify the cost on strictly economic grounds.

The demand to be trained in unsheltered jobs has in the main emanated from blind people themselves. It is not the crust of charity they demand, but the right to compete on level terms with the ordinary worker. To meet this demand, Letchworth College was opened 2½ years ago. Staffed by three training officers, the courses here last two months and cater for fifteen trainees at a time; 95 per cent of the trainees have been placed.

For some, this training is a first contact with light machines and industry; others, though perhaps with industrial experience, may have been on the administrative side or performing a skill or craft they can no longer pursue. What matters is that they should demonstrate some aptitude and liking for machine production or inspection, or assembly work. In this respect, Letchworth College is a testing ground, providing a basic training. From here, they can with confidence either join a works training scheme or, accompanied by one of the placement officers of the National Institute for the Blind, learn to handle a machine similar to the one they have been trained on. These placement officers are a great help to any firm unfamiliar with the ways and methods of blind operatives. They smooth the settling-down period, work alongside the operative, check the safety precautions, and familiarise him or her with the surroundings. All this rarely takes longer than a week. However, many firms with experience of employing the blind prefer to be responsible for their complete training, especially if the worker has gone blind in their service.

Assembly work is not usually so suitable for blind workers, but this operative is making a good job of assembling telephone dials.

In what kind of jobs do the sightless excel and produce performances equal to the sighted?

Reports from the engineering world show that the war-time discovery of employing the blind, because of their highly-developed touch-sense, on fixed-gauge, thread-gauge and comparator inspection, has been successfully continued since the war on short-run inspection. Equipped with a complete range of precision instruments with Braille readings—micrometers, depth gauges, bevel protractors, height gauges, vernier callipers—the consistency of their accuracy has brought tributes from the motor, radio, and model aircraft industries. Likewise, in the field of standardised packaging, non-sighted women have developed a high degree of dexterity, notably in the bakery and confectionery trades, plastics, and photographic supplies. In the last-named, the semi-darkness, says Kodak Ltd., is more suitable psychologically to the blind girl than to one with normal sight.

Assembly work is regarded as being somewhat less suitable, generally, than machine operation. Yet here again, motor manufacturers have successfully employed the blind on dashboard panel assembly, and in the radio industry they have worked on pentode valve assembly, on transformers and on assembly of radio sets. But the output of the sighted worker is likely to be higher, though not more reliable, than all but the most dexterous of the blind workers.

The most fruitful field of employment has been in the machine shops. Both St. Dunstan's and the N.I.B. have proved to the satisfaction of industry that the handling of lathes, drills, presses, routers, plaster presses, and other pre-set machinery can be accomplished by the blind with output quotas equal or even superior to those of the sighted. The blind have the advantage of single-mindedness. Just as their accident rate is lower, so is their tool breakage rate and there are no passing distractions to disturb the rhythm of their work.

Failures there have been. Certain jobs like heavy pressing at dyer's and cleaner's are not really suitable. The test is a simple one. Can the blind person be trained to the same standard of efficiency as any other worker?

Mechanised After 300 Years

FOR three centuries stone from the quarries in the Southowram district of Halifax, Yorks, has been trimmed by hammers and chisels wielded by skilled craftsmen. These quarries produce many thousands of paving stones, wall stones, etc., every year.

A vast range of engineering machines for the planing and shaping of metal is available, and in 1946 experiments were made with the idea of adapting these machines for stone trimming. It was proved that this type of machine *could* be used for stone trimming if running speed adaptations were made and tungsten carbide tools were used.

One other obstacle had to be overcome; the dust which results from high-speed cutting and trimming of stone. Successful modifications were made to a standard set of dust extraction fans and pipes, and the newly built machine department was put into full production without any stone dust in the atmosphere. The dust now travels down a lengthy underground tunnel and is discharged a safe distance away from the workers. Larger pieces of stone become deposited in the pipe and are salvaged at intervals for crushing and manufacture into composite stone slabs.

These machines are worked by employees who need have no particular knowledge of stone treatment, yet their output is greater than that of a hand trimmer. The machines are fed with stone blocks by overhead power hoists and much of the tedious carrying work previously associated with quarry processes has now been eliminated. Hand trucks and wooden pallet platforms are also used for handling.

Efficient Lifting

MUCH production effort is wasted by workers who do not use their own bodies efficiently in lifting, carrying, pushing, stacking, etc. Scientific investigations have produced some useful recommendations for conserving energy and gaining increased results for the effort expended.

Lifting.—For light loads, unless lifted at frequent intervals, knees should be kept stiff and the back bent. For loads exceeding 56 lb., it is better to bend the knees, keeping the trunk slightly bent also. The Industrial Health Research Board recommends that the maximum load which can be lifted safely by an experienced male worker is 130 lb. (compact load). For young persons, suggested maximum loads range from 35 lb. to 60 lb., depending upon the age, sex, and whether work is continuous or intermittent. The average healthy woman can lift 50 lb. without strain, and a well-trained worker may exceed this by as much as 20 per cent.

Carrying and conveying.—A load supported at waist level is distributed through the hip girdle to the thighs and legs, leaving chest movement unrestricted, and an undeflected centre of gravity is maintained. Another good method is to carry the load on the head, while little effort is lost if loads are carried on the shoulders. A study in barrow pushing showed that starting and stopping caused considerable expenditure of energy. Proper design of the barrow and balanced distribution of the load all save effort.

Pushing.—Static effort is the most wasteful form of exertion. Pushing a load into position, especially if the body is held in an unnatural position, results in fatigue.

Stacking.—Where materials are being constantly moved from one level to another, human effort can be saved by providing a loading platform. Loads should not be stacked above eye level for men nor breast level for women.

(Condensed from *Business*, 12/51.)

See the People

USEFUL rule for stimulating understanding between employer and employee—"See the people."

Like the chairman who interviews three employees, chosen at random each week, and gets them to talk about the business.

Like the president of a small company who sets aside one evening a week to have dinner with groups of employees.

Like the president who personally congratulates every new member of the company's 25 Club and presents them with an autographed photograph of the occasion.

Like the executive who turned out to help an employee whose home was burned down in the night.

Like the works manager who takes each foreman to lunch on his birthday.

Like the company official who visits sick employees every week.

Like the editor of the works newspaper who prefers a place in the plant to a comfortable office at headquarters so that he can be close to the people he is writing for.

(Condensed from *Management Review*, 10/51.)

Readership Test

H. J. HEINZ and CO., Pittsburgh, have devised a "quickie quiz" to test the readership of their works magazine, 57 *News*. Questions are based on items which have been carried in the magazine during the previous year, and are a means of driving home to employees important information about the company.

(Condensed from *Factory Management and Maintenance*, 11/51.)

Welfare Foods

TO encourage working mothers to give their children free orange juice and cod liver oil, in the Wigan area the Ministry of Food have arranged for supplies to be distributed through factory canteens. Mothers can obtain these irrespective of the locality in which they live. Firms are helping to publicise the scheme through the distribution of printed slips, notices in the canteen and verbal reminders.

(Condensed from *Industrial Welfare*, 11/51.)

Lunch time in the main dining hall of the canteen at Lotus Ltd., Stone. The hall also provides admirable facilities for sports and social events. The canteen, opened in October, 1950, shows a very satisfactory record on its first year's working.

Two stills from the films. Top: a member of the Hosiery Industry Team times operations with a stop-watch—seven buttonholes are made in 14 seconds.
Bottom: convenient work-tables enable the girl machinists to get on quickly and easily. Work is brought up on specially designed trolleys.

Productivity Films

AS part of the campaign to bring management and employees together in the study of new ideas and methods in industry, a series of film programmes is to receive a nation-wide showing this winter. More than 4,500 shows are planned. The films themselves are excellent, and should make a strong appeal to factory audiences.

"Over to You" is the story of the visit of the hosiery industry's productivity team to the U.S.A., and is of special interest to all industries which have sent similar teams. "The Easier Way," which gives an American view of motion study, is a homely but telling story of how the application of motion study reduces effort and increases output. "Motion Study in Action," filmed in a British factory, gives concrete examples of its application in industry. "The Key to Progress" shows how the standards of living have been raised in Britain since the mid-nineteenth century through the effective use of new machinery. "Lay-out and Handling in Factories" also demonstrates the importance of cutting down unnecessary movement and making the handling of goods easier by mechanical aids.

Three more films, ready this month, are grouped together in a programme entitled "Human Relations in Industry." They are: "Introducing the Worker," which discusses the best way of introducing the new worker to his job; "Why Works Information," which describes the contribution of information schemes to harmonious relations; "The Need for Supervisory Training," which considers the qualities needed by supervisors and the best methods of training them.

These films can be borrowed through regional offices of the Central Office of Information.

Films may be presented singly or in groups to meet the needs of the audiences. Mobile cinemas can be provided where necessary.

Truck Control Pays

By the use of a central despatch system, Pratt and Whitney Aircraft Division, East Hartford, Conn., found that their twenty-two fork-lift and low-lift platform trucks could handle 800 loads a day. Instead of assigning a certain number of trucks to each department, they set up a central switchboard with twenty-one call stations at key points throughout the plant. Two clerks at the switchboard have a map of the plant on which they plot the location of trucks. When a truck is required, a call is made to the switchboard, who switch on a blue light at the location nearest to where the truck is required. The first driver in that area to see the blue light phones the switchboard for instructions as to type and size of load to be picked up, departments where required, and so on. Each driver keeps a brief record of the loads he handles, so that a misdirected load could be traced. While the system is flexible and important loads can be moved quickly, it ensures strict control of trucks and drivers.

(Condensed from *Factory Management and Maintenance*, 10/51.)

Gone but not Forgotten

ALL retired employees of the Nashua Gummed and Coated Paper Co., are invited to take an active part in the company's suggestions scheme. All the necessary forms, instructions, booklet, etc., are sent to them together with a special letter explaining the setup.

(Condensed from *American Business*, 5/51.)

Ideas from House Magazines

40 to Share £450

In the essay competition for employees of Richard Thomas and Baldwins Ltd., 168 entries were received, and as a result forty prizewinners share £450. Major winners have been invited to attend a special luncheon given by the chairman, Mr. E. H. Lever, in London, when prizes will be presented. The adjudicator, Professor E. V. Morgan, M.A., stated that the general standard of the essays was good. **(Ingot News.)**

Apprentices Old and New

William Heap, who retired from John Laing and Son Ltd., after 53 years' service, was apprenticed in 1899, when his father was a bricklayer with the firm. The family link with the company, which goes back over 100 years, is being maintained by William's son Thomas.

Today the firm has a comprehensive apprenticeship training scheme closely supervised by the personnel department, so that each boy's progress can be studied. Boys may be transferred from one site to another to gain the necessary experience, or to a town where they can attend technical college. At present there are 245 boys apprenticed to the firm. Opportunities open to the lads are illustrated by the fact that many of the company's chargehands, foremen and executives started as apprentices. **(Team Spirit.)**

Production Routine

At the Craghead works of Hall and Earl Ltd., thirty machinists sit fifteen a side at benches; one side makes up pants, the other, shirts. Cut work is fed at the top of the line and finished garments come off the other. Each machinist completes her operation and drops each garment into a bin at her side. These are taken by the next girl who does her operation and drops the work into her bin. This continues all down the line until the garments are finished. The work ticket follows with the last garment of each bundle. Bottlenecks are avoided by "utility girls" who can do any operation required. A scoreboard shows the team's progress at intervals during the day, with a summary of the week's daily score. **(Puritex News.)**

Youth Takes a Bow

Speaking at the first meeting of the Youth Committee at Steel Peech and Tozer, the chairman reminded members that their job was to see that new boys were made to feel at home and had the company's activities explained to them. He asked that any information supplied to the committee should be taken back to the various departments. This committee is an extension of the former Youth Safety Committee and is regarded as a training ground for future works council members. **(The Phoenix.)**

A Service to Civil Defence in Industry

By SIDNEY L. HARFORD

Secretary, Institute of Civil Defence

Membership of the Institute of Civil Defence, says our contributor, has much to offer industrial C.D. personnel besides a technical qualification, valuable though this is.

WITH the needs of industry in mind, the Institute of Civil Defence have introduced a licentiate grade of membership to which nominations may be made by subscribing employers engaged in industry or commerce, by the nationalised industries and, incidentally, by statutory authorities of all kinds. What advantages does such membership bring?

Before this can be properly answered, something must be known of the Institute's history. The I.C.D. is the only body of any kind associated with Civil Defence which has maintained an unbroken existence before, during and since the war; and until the recent advent of the Civil Defense Research Associates Inc., in the U.S.A. it was the only organisation of its type in the world.

It started life as the Air Raid Protection Institute in 1938. A party of Members of Parliament, having witnessed air raids and their effects during the Spanish civil war, were greatly impressed by all they saw. On their return to this country, rapid steps were taken to arouse interest in the need for air raid precautions designed to protect the people and their material interests against the dangers of aerial attack. One result of these efforts was the bringing together in a professional body of many people whose knowledge and experience fitted them for enquiry and research into Civil Defence problems.

The Institute's advisory and educational services were invaluable to both persons and firms before and during the war. Membership was individual, and included many men and women occupying responsible positions in the professions, industry, commerce, etc. The Institute's diplomas were issued with care and jealously guarded. They represented —as they still do—the highest obtainable certificates of qualification in Civil Defence. The present body is the outcome of the continued development of this, the first professional and technical Civil Defence authority ever to be established.

The basis of membership is still individual. The Fellows and Associate Fellows represent, beyond doubt, the cream of Civil Defence personnel. The growing associate membership, from which recruits to higher diploma-holding grades are drawn, indicates the widespread support which is found among the rank and file of Civil Defenders. Fourth grade of membership is that of the associated group, designed especially for local associations and the like. Finally, there is the licentiate grade.

So much for the background: now, the advantages to be gained from membership.

What Members Gain

Employing organisations, and each of their representative licentiates, receive the various publications of the Institute as they are issued. These comprise the *Journal*, various supplements containing selected information which seldom appears elsewhere, and certain publications produced for sale which are either reserved for members or supplied to them at appreciably reduced prices. A *Civil Defence Year Book and Directory* is in preparation. The Institute also provide a supply service for both official and non-official literature.

Lectures are arranged from time to time when really first-class opportunities occur. An advisory service is at the disposal of licentiates in need of information.

The value of a technical qualification bestowed by the certificate of a recognised and authoritative professional institute is well known and there is added advantage in belonging to a body whose members are the best and most fully informed in matters relevant to their craft. These are useful tools in the hands of efficient officers and should help considerably in the encouragement of interest and the creation of enthusiasm among personnel who might otherwise be indifferent to interests vital to themselves and their employers. Evidence of qualification for the job, especially advanced qualification, is a powerful incentive to confidence and smooth working in the constitution and maintenance of any specialist service.

Rescue Courses for Industrial Instructors

BELIEVED to be the first of its type in the country, a training course in rescue instruction for potential Civil Defence instructors in industrial and commercial firms was held last month by the Middlesex County Council Civil Defence Corps Authority. Students underwent practical and theoretical training and delivered lecturettes before taking the 6 hour examination with which the training ends. The course lasts, in all, 60 hours, spread over 10 days.

The Middlesex organisation have already run a dozen courses of training for general instructors nominated by firms in the county, and the series will continue. So far, ninety-five instructors have received their green certificates. The course lasts 36 hours.

Headquarters of Middlesex Civil Defence is at 65 Forty Avenue, Wembley. Mr. A. G. Field, O.B.E., is the County Civil Defence Officer.

BREATHING APPARATUS

For use in factory Civil Defence and fire-fighting—self-contained compressed air breathing apparatus. For fuller description, see p. 312.

How the Industrial Nurse Helps Factory Safety

By MARGARET G. GOOLSBY, S.R.N.

(Industrial Nursing Certificate), Sister-in-Charge, H. J. Heinz & Co. Ltd.

Whether working on her own or as a member of the factory health team, the nurse does much more than merely treating accident cases. She can be invaluable in spotlighting dangerous methods and in disseminating safety propaganda.

THE industrial nurse is probably the only person in the factory who sees every accident victim, and she is often on the scene very soon after an accident has happened. She can, therefore, help in bringing to light unsafe practices and do much, by propaganda and advice, to further the cause of safety in the factory. In fact, she may find herself *responsible for* the employees' safety, if she works for one of the smaller concerns with neither a full-time nor a part-time safety officer.

Generally, however, her contribution to accident and sickness prevention is made as a member of the team—factory doctor, welfare officer, safety officer, etc.—concerned with the health and safety of the worker. Here are some of the ways in which she can—and does—play her part.

Treatment of Accidents. She is responsible for the administration of the health department, and for providing facilities for treating accidents. The department must be suitably equipped to deal with all accidents likely to occur in the industry concerned. Arrangements must be made with outside authorities for transporting the casualty home or to hospital, if there is no works ambulance.

In addition to the personnel of the health department, it is common practice to have voluntary first-aiders drawn from members of the staff. In hazardous occupations, such as the mining and chemical industries, and in heavy industries, first-aid and rescue teams may have to be called upon in an emergency. First-aiders belonging to St. John's Ambulance Brigade and the British Red Cross Society are proficient in general first-aid, but they must also be familiar with any measures peculiar to industry. Practice classes can be arranged by the nurse and mock accidents—of a kind liable to occur in the factory—staged.

The provision and maintenance of first-aid boxes in the factory is also the nurse's responsibility. There are certain exemptions to the Factories Acts where there is an ambulance room for immediate treatment, but first-aid boxes are required in outlying parts of the factory and near dangerous processes. In addition to statutory requirements for dressings, bandages, etc., the first-aid boxes should contain any special treatments necessary, e.g., antidote for cyanide poisoning and eye washes for chemical splashes in the eye. The nurse must be satisfied that the first-aiders are familiar with such treatments, in order to prevent accident injuries from developing into something more serious. Special rescue apparatus, such as respirators, must be inspected frequently and maintained in good repair.

Environmental Factors. Where there is no safety officer, the nurse may have to ensure that there is safe means of access to and from the place of employment; that corridors and stairs are kept clear, and gangways clearly marked; and that the place of work itself is safe, with no danger from overhead working. Suitable guarding of machinery is, of course, the responsibility of the engineer and the technical staff, but the nurse should be able to recognise a faulty guarding and should know the principles of guarding.

She must be aware of the uses to which protective clothing can be put in her factory but, because so much depends on the good sense or otherwise of the wearer,* she must keep in mind Sir Thomas Legge's dictum:

> "If you can bring an influence to bear external to the worker (i.e., over which he has no control), you will be successful. If you cannot, or do not, you will never be wholly successful."

(Continued on page 314.)

DUTIES OF THE INDUSTRIAL NURSE*

1. **Administration of health department.**
2. **Emergency and primary treatment.**
3. **Follow-up treatment where appropriate.**
4. **Help with medical examinations.**
5. **General health supervision.**
6. **Health education.**
7. **Hygiene and accident prevention.**
8. **Advisory services to management and employees.**
9. **Keeping records and reports.**

* According to the Dale Committee on Industrial Health Services.

* Rubber or plastic gloves, intelligently used, can be satisfactory for the handing of irritant materials; but if they are worn correctly *before* the tea break, and inside out *afterwards*, they do more harm than good.

More University Men for Industry

MORE and more senior positions in American industry are being filled by university graduates, a practice which has had and will continue to have a vital impetus. This is the view of the writers of the Productivity Report on *Universities and Industry*. They urge the wider use of scientifically trained men in British industry, and increased facilities for full-time courses at universities or technical colleges, as well as a closer association between universities and colleges and industry.

The *Education for Management* team report that recent years have shown an enormous expansion of provision in the United States for training in administrative studies. American experience has shown that productivity and management education are closely related, and the team recommend that British industry as a whole should study means for promoting educational experiments in executive development. American universities provide advanced training courses for high-level executives, and American undertakings are willing to release executives for further education and training.

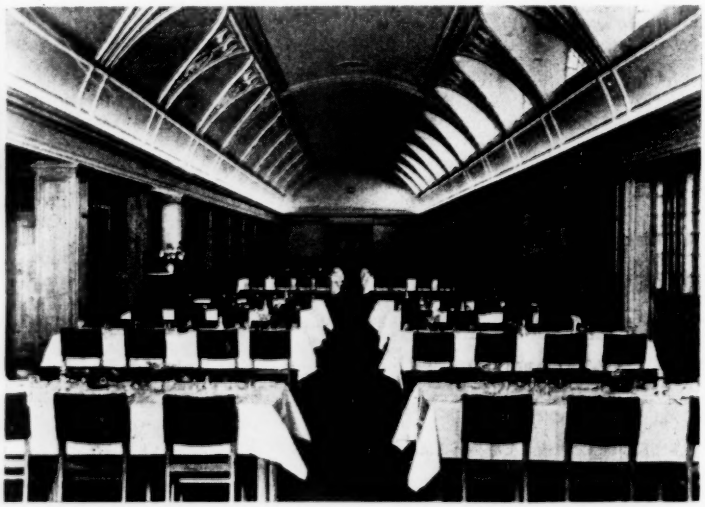
The American worker takes a pride in operating expensive machines and appears to have no fear of mechanisation as a threat to his security, according to the Productivity Report on *Metal Finishing*. He recognises that mechanisation means increased prosperity for his firm and indirectly for himself. On the technical side, the team found comparatively little that was not known and practised by the larger firms in Britain.

The team concerned with *Saving Scarce Materials* confined its attention to the engineering and allied industries, so that the survey was limited to scarcity in supplies and economy in the use of metals. Much of the report deals with the considerable advances made in the U.S. in the use of low-alloy or plain carbon steels. Redesign of manufactured products so as to conserve scarce materials is recommended as a continuous activity.

Direction Without Tears

A NEW Order to "persuade" people to take employment in undermanned industries is likely to be introduced by the Government soon. This Regulation of Engagement Order, as it will probably be called, will impose obligations on employers, not employees.

Aim of the Order is to ensure that employers notify local labour exchanges of their vacancies. Inspectors from the Ministry of Labour will vet these applications and visit the factories concerned to determine the firms' manpower requirements. Supplies of labour will be scaled down according to the national importance of the work engaged upon. In this way the greater proportion of labour will be directed to firms engaged in rearmament, export and home capital goods.



Many of the London staff of Imperial Chemical Industries Ltd., are returning by degrees to their pre-war headquarters, I.C. House, Millbank, and the kitchens and dining-rooms there have been refitted and modernised to cater for them. Here is part of the main refectory, which seats 384 people and where 1,100 luncheons will eventually be provided each day. Other accommodation includes bar and snack bar, men's and women's coffee rooms, and directors' and visitors' dining-rooms. Both subsidised and á la carte meals are served.

Tall Boys Keep Jobs

THE hazards faced by youth in entering industry and commerce have been surveyed by professors of Glasgow University and recorded in *The Young Wage Earner*, published for the Nuffield Foundation.

In spite of great advances, the professors found that there is still some failure to direct youth into channels of social usefulness and productive work. The 1,314 Glasgow boys who left school at 14 years, in January, 1947, within a few days became messengers, store boys, van boys, farm hands, pressers, radio mechanics, and labourers. In the next three years one in four were still in stop-gap jobs; less than half had undergone sustained training for skilled work; one in four still shifted aimlessly from job to job; three in four had never made use of the facilities for further education; and about half had never joined any church or organised social group. The most regular leisure activity of 88 per cent of them was a weekly visit to the cinema.

On the other side, 50 per cent of the boys had shown some sense of purpose in selecting their jobs and had settled down, probably after taking one stop-gap job. Tall boys, it was noted, kept their jobs longer than undersized ones.

Safety for Juniors

FOUR HUNDRED young workers from Birmingham factories, given the afternoon off by their employers, attended the first meeting of the Junior Industrial Safety Group on December 4. They had a stimulating half day listening to such experts as H.M. Superintending Inspector of Factories, and to such local "heroes" as Tom Dollery, the Warwickshire cricket captain, all explaining how important accident prevention is to the lads themselves and to the country generally.

Chief purpose of this inaugural meet-

ing was to impress the young listeners with the importance of safety and to enlist their co-operation in a campaign of accident prevention. Later meetings will aim at gradually evolving schemes of safety techniques, which the young employees will, it is hoped, take back into the factories where they work.

Good Relations

THE need for good relations between employers and workers was stressed by the Minister of Labour, Sir Walter Monckton, when he opened the Birmingham Trades Union Festival last month. The Minister told his audience, who were celebrating the 85th anniversary of the Birmingham Trades Council, that he was convinced there was much more goodwill between managements and workers throughout this country than some people realised. It was equally important that there were good relations between both sides of industry and the Government.

Youth Settles Down

THE second annual report of the London County Council's youth employment service states that young people are by no means as unsettled, irresponsible and indifferent as is sometimes supposed.

During the year ended July, 1951, the number of boys and girls seeking work for the second or more times in the year decreased by 15.5 per cent. In an enquiry involving 200 boys and 198 girls who left school in the summer of 1950, it was found that the majority took the advice and employment offered, and about 70 per cent of boys and 74 per cent of girls settled down well in their first jobs. A further 18 per cent and 12 per cent respectively were suitably placed after a second application.

Building Incentives

MINISTRY of Works state that there were incentive schemes in operation at 28 per cent of the 28,428 building sites surveyed in England and Wales last June. The number of workers involved was 123,051, or 41 per cent of those employed by main contractors.

In Scotland, where incentive schemes have been introduced more recently, they were found at about 11 per cent of the sites.

More Miners

FIRST increase in mining manpower since last April was recorded during the week ended November 10. After dropping steadily by about 100 a week, the number increased by 200 to a total of 694,000.

HOW TO REDUCE ACCIDENT RATES

Two displays at the recent exhibition staged at Shieldhall by the Scottish Co-operative Wholesale Society's welfare department. Purpose was to show what the department has achieved over the past few years. Hours lost through accidents have been cut from 28,000 in 1946. to 16,000 in 1950, by: (1) better publicity through visual aids; (2) joint consultation; (3) tidying-up factories; (4) use of better protective equipment and modern machinery in factories with high accident rates; (5) educating young workers in accident prevention; (6) vigilance of medical personnel.

WAGES NEWS AND VIEWS

AGRICULTURAL WORKERS — Agricultural Wages Board is to issue proposals for wage increases in the rates applicable during first two months of employment to inexperienced workers. Proposed rates are 90s. for men, 67s. for women, with proportionate increases for juveniles.

BOOT REPAIRERS — Incorporated Federation of Boot Trade Associations announce that piece-rates for repairers are being increased by 10 per cent, time rates for benchmen by 8s. 6d., with proportionate increases for workers under 21.

CLERICAL WORKERS — About 180,000 clerical and administrative workers in engineering have received wage increases under award announced by Clerical and Administrative Workers' Union. Male clerical workers over 21 receive 14s. a week and women 10s. 6d., with proportionate increases for juniors.

DOCKERS—A claim for a substantial increase in pay for about 100,000 dockers has been presented to the employers. Dockers are also asking for a second week's paid annual holiday and an increase in the guaranteed wage which at present is £4 8s.

DRAUGHTSMEN — About 50,000 engineering draughtsmen (other than shipbuilding) receive increases of 14s. a week under agreement between Engineering and Allied Employers' National Federation and Association of Engineering and Shipbuilding Draughtsmen. Employees with basic salary of £600 a year or more are excepted from this award.

ENGINEERS—Wage increase of 11s. a week and a second week's annual paid holiday awarded to about 2,500,000 workers in Confederation of Shipbuilding and Engineering Unions. Original claim was for all-round increase of £1 a week.

FOOTWEAR WORKERS — New wage scale agreed between employers and unions for workers in boot and shoe industry. Revised scale varies from £5 16s. to £6 10s. for men, and from £4 4s. to £4 15s. for women. Further increases of 5s. to men and 4s. to women will be granted on each rise of five points in retail price index. Pieceworkers receive 5 per cent increase on same scale, and there are proportionate increases for juveniles. Workers' claim for a 40 hour week not proceeded with.

GAS WORKERS—Gas Council and Confederation of Shipbuilding and Engineering Unions have agreed on a wage increase of 3d. an hour for works maintenance men.

MERCHANT NAVY—Pay increases for officers and ratings, agreed by National Maritime Board, provide for increase on monthly pay of £2 for adult ratings and £1 to boys, where the employers provide food. Certain ratings in higher grades receive £2 5s.

and £2 10s. extra. Where payment is weekly and no food is provided, corresponding increases are 12s. 10d. a week. If food is provided, the owner may deduct £1 1s. a week instead of 17s. 6d. as before. Increases for officers proportionate up to £4 5s. a month. All overtime rates have been increased.

MINERS—Minimum rates for underground workers increased by 13s. 6d. a week to £7 0s. 6d., and those of surface workers by 11s. 6d. to £6 1s. 6d. under agreement between National Coal Board and National Union of Mineworkers. These advances apply also to women and boys. Pieceworkers receive increase of 2s. 6d. per shift. Miners are to receive payment in view of their second week's annual holiday.

POSTAL WORKERS—Delegate conference of Union of Post Office Workers instructed their executive to press for wage increase of 18s. a week.

RAILWAY WORKERS — London Transport Executive's offer of a wage increase of 8 per cent to about 20,000 of their salaried and railway conciliation staff has been accepted by the three railway unions.

SHOP ASSISTANTS — New minimum wage rates for about 100,000 employees in multiple grocery and provision shops in England and Wales agreed between National Association of Multiple Grocers and Union of Shop, Distributive and Allied Workers. Increases on existing minimum rates vary from 9s. to 25s. a week.

Better Works Relations

ANOTHER TRUE STORY, published by the Ministry of Labour, is the second of a series of booklets designed to help industry to improve industrial relations. It deals with works information and is the sequel to the booklet on joint consultation.

Mr. W. D. Thomas, B.A., new personnel relations officer of Short Brothers and Harland Ltd., and formerly of the Ministry of Labour industrial relations branch.

The Minister Said . . .

Overtime Earnings (Tax)

The Royal Commission on the Taxation of Profits and Incomes was taking evidence on the question of tax relief on overtime earnings. The importance of finding ways and means to increase productive effort was recognised, but hitherto it had proved impossible to find a practicable method of giving tax relief.

(*Chancellor of the Exchequer*, 20/11/51.)

Retired Workers

Response to an appeal in Bristol made on October 14 last, for retired skilled workers to return to employment had resulted in thirty applications and a large number of inquiries. Employment exchanges throughout the country had instructions to invite retired workers to return where there were labour shortages.

(*Minister of Labour*, 27/11/51.)

Higher Technological Education

Urgent consideration was being given by the Government to the question of technological education, and consultations were proceeding with various departments, but it was not yet possible to make a statement of policy.

(*Minister of Education*, 29/11/51.)

Wages and Production

In October, 1951, weekly wage rates increased by 10 per cent over their average level in 1950. This was a measure of changes in wage rates, and and not necessarily actual earnings, for which figures were not yet available. Estimated increase in the level of production over that of 1950 was 4 per cent; part of this was due to increased unemployment. It was evident, therefore, that increased production had only been a small proportion of the wage increases this year.

(*Minister of Labour*, 29/11/51.)

Italian Workers

It was estimated that 105 miners' lodges had refused to allow Italian workers to be employed in the mines. The National Coal Board were anxious to engage as many Italians as possible and were dealing with the problem.

(*Minister of Labour*, 3/12/51.)

Factory Generating Equipment

The position regarding the installation of independent generating equipment in factories, in relation to any questions of contractual or financial restrictions which might be imposed by the British Electricity Authority, was now being investigated.

(*Minister of Fuel and Power*, 3/12/51.)

I.W.S. Founder Retires

AT the annual meeting of the Industrial Welfare Society in London last month tributes were paid to the work of Sir Robert Hyde who, it was announced, would retire from the staff at the end of the year.

Sir Robert founded the society 33 years ago, and will continue to be associated with its work in an advisory capacity.

Fewer Union Members

TRADE union membership in Britain decreased by about 30,000 last year. The total for 1950 was about 9,235,000. Of these, 7,565,000 were men and represented a decrease of 42,000. There were 1,670,000 women, an increase of 10,000, but even so, only one in six women employed in British industry is a member of a trade union.

LETTER TO THE EDITOR—*Training Salesmen*

Sir,

I read with very great interest in the November issue of PERSONNEL MANAGEMENT, WELFARE AND INDUSTRIAL EQUIPMENT, the article written by Paul Nugat ["Training Employees to Serve as Well as Sell"].

It is well known that American salesmanship differs greatly from that of the British. Regarding the affable greeting to the motorist, plus any "fussing around," this would, I am sure, tend to convey a line of thought to the customer: "I wonder what's cooking."

I, myself, have been driving for many years and have always found our garages and their hands very obliging. I have also noticed the manners of some customers who have pulled in, and to be polite to some would, even to to me, be a trying effort.

Of course, on the other hand, talks, films and filmstrips may help, but manners and personality are born in a person, whether customer or garage attendant. They cannot be put there by lectures, etc., and I respectfully say, "Who should know better? I am a salesman."

Yours etc.,

J. L. V. KWAYSSER.

Rhodes (Wholesale Supplies) Ltd.,
174 Broad Street,
Birmingham 15.

New Equipment at the Catering Exhibition

A preview of some of the products which 200 trade exhibitors will be showing at Olympia next month

FOR the first time in fourteen years, competitions will form part of the programme of the Hotel, Restaurant and Catering Exhibition, to be held at Olympia, London, from January 23 to February 1, 1952. Among those competing in the twenty-six classes will be industrial canteen staffs and apprentice cooks and confectioners.

Special emphasis will be laid on trade training. Selected students from nineteen technical colleges where hotel and catering courses are held will take part in demonstrations arranged by the Hotel and Catering Institute.

The exhibition is sponsored by fifteen national associations representing all branches of the trade. The commercial exhibits, occupying some 200 stands, will embrace every category of equipment and supplies, with kitchen engineering taking first place but including such classes as food and drink, furniture and carpets, cutlery and crockery, bar and bathroom fittings, water boilers and refrigerators, sanitary equipment, linen and insecticides. Here is a preview of some of this equipment.

One of the newest lines to be shown is a tea trolley built by **W. N. Froy and Sons Ltd.** for T. Wall and Sons Ltd., to the design of Mr. Alun Phillips, until recently Wall's personnel manager. Six trolleys of this design are now in service in the Acton and Willesden factories of the company. Dimensions are: height to top of urn, 4 ft. 3 in.; length, 3 ft.; width, 2 ft. The low height enables the urn to be filled easily at the supply point, and its compactness renders the trolley stable and easy to handle and park. Any size of urn can be used, and the tap projects directly over the tray of cups. The large drip-tray is easily cleaned.

Another novelty is the anti-skinning device for milk produced by **Jas. Stott and Co. (Engineers) Ltd.** This consists of a stainless steel float which rides on the surface of the milk in a vessel having parallel sides over the major part of its length. Diameter of the float leaves just enough clearance within the vessel to allow the float to rise and fall with the level of the milk. By this means the surface of the milk is almost entirely protected from exposure to the air—the condition which is at the root of milk-skin formation.

Among the six new products to be exhibited by **Crittall Kitchen Equipment Co. (1950) Ltd.** is an industrial size pressure cooker (at very nominal cost) which operates at 20 lb per sq. in. pressure and, it is claimed, saves 80 per cent cooking time and 75 per cent fuel. Another new line is a 2-pint coffee maker, for use on either gas or electric stoves, which is said to have the coffee ready for drinking within three minutes. This company will also be displaying a combined gas and electric range, designed to overcome fuel difficulties. In it, an electric oven has been combined with a gas boiling top in one unit, so that whether there is a gas failure or an electricity cut, cooking facilities are always available. Another exhibit will be a bread roll slicer to slice up to 1,000 rolls an hour.

Designed by a personnel manager, this Froy tea trolley is only 4 ft. 3 in. high to top of urn.

The Stott anti-skinning device for milk. Float protects milk surface from the atmosphere.

In the new potato chipping machine which will be seen on the stand of **Peerless and Ericsson,** each potato is chipped as it is turned lengthways, and the chipping action is such that the ends of the chips are not bruised. A safety device protects the machine from damage by stones. Output is between thirty-five and forty chips a minute.

Among the wide range of equip-

ment included in the exhibit of **Euk Catering Machinery Ltd.** is the Visi fish frying range, which permits the customer to select his own piece of fish from those displayed on a rack under glass. Fish on show is maintained in good condition by radiant heat, which allows free air circulation and overcomes the old problem of storage. This gas-operated model has studded pans which spread burner heat over the whole base, thus eliminating hot spots and permitting pan bottom frying (though deep fat frying may be used if desired).

Among the detergents and cleaning materials will be Gos, a detergent made by **Gospo Ltd.** which sterilises as it cleans crockery and cutlery. This company will also be showing their well-known scouring powder, Ruba paste for cleaning linoleum and rubber floors, soap powders, hard and toilet soaps, disinfectants, etc. Illuminated culture plates, illustrating the growth of bacteria on dirty food utensils and cloths, will be a dramatic exhibit on the **Deosan Ltd.** stand, which will also feature the company's routines for avoiding infection of such utensils.

The principal exhibit of **Benham and Sons Ltd.** will be a complete gas wall range fitting, incorporating several new design items. The solid-top range units which form a part of this fitting have high efficiency burners and a "fry top;" included also are working tables, bain-marie, deep fat fryer unit, underfired silver grill and an elevated salamander, mounted on a pot rack running over the length of the whole fitting.

With this Benham opener, flanged cans up to 10 in. high may be opened. Clamps or screws to the table.

Operating on the principle advocated by the British Medical Association and the Catering Trades Working Party, the Splendid crockery washing machine of Staines Kitchen Equipment Co. Ltd. brushes clean the dirty crockery under water.

The right and wrong ways of cleaning domestic utensils will be demonstrated on the stand of **Industrial Soaps Ltd.**, who will be showing a wide range of soaps and cleansing products for use in industrial premises and on dishes, cutlery and the person. The necessity for personal cleanliness on the part of all who handle food will be stressed. Attention will also be paid to the washing-up problem in catering establishments. Demonstrations of dish washing by hand will be given.

Making its bow on the **Radiation Ltd.** stand will be a new gas cooking range, the Stratford. This has a 30 in. wide oven with double doors and front-reading Regulo control, surmounted by a full-size hotplate. This hotplate is provided with a series of drilled ring burners of suitable capacities, designed to give high efficiency and maximum flame stability at low gas rates. Safety taps are fitted. The Stratford has flush ends and a flue outlet so positioned that wall and central suites can be arranged to requirements. Dimensions: 36 in. high, 36 in. wide, 31½ in. deep. Hotplate, 36 in. by 30 in; gas inlet, ¾ in. B.S.P. male. Burner ratings (in B.Th.U./hr.): small ring, 10,000; medium, 15,000; large, 20,000; oven burners (two) 16,500 each.

Among the custard powder, cornflour, cake mixtures, etc, which **George Borwick and Sons Ltd.** will be exhibiting is Borbak, a new formula baking powder specially produced for the catering trade. It is packed in 7 lb. laminated and plasticised paper containers, moisture tight and with a metal seal.

Liquid Apples for Lunch

IN the United States and on the continent, unfermented fruit juices have long been popular. Production of apple juice in Switzerland, for instance, soared from 3.5 million gallons in 1939, to more than 10 million gallons in 1950. Unfermented apple juice is now gaining popularity in Britain also, and sales to works restaurants are on the up grade.

Previously, supplies have all been imported, mainly from Switzerland; but recently one manufacturer has started production in this country. On behalf of "liquid apples" it is said that every pint bottle contains the juice from 2 lb. of apples, and that the juice is 11 to 12 per cent pure fruit sugar, 5 per cent of which is glucose. Consequently, the makers claim that apple juice is particularly suitable for a lunch time drink on a working day and that its energy-restoring properties have a beneficial effect on the afternoon's output.

This Novel Shows Men at Work As They Really Are

Men at Work. Winston Clewes. Michael Joseph Ltd. 10s. 6d.

IT is odd that so few novels deal with men at work, since all the ingredients of strong drama can be found in any factory. The reason seems to be that in order to write successfully about men at their jobs an author needs to combine the practical qualities required in commerce or industry with the special skill of the artist. One of these rare people is Winston Clewes, an established novelist who is also an executive in a large manufacturing company, in which he began as an office boy and rose to be manager of the planning department.

His new novel deals with a model factory run on democratic lines, with a works council that is given wide powers by a paternal chairman. Labour relations are as happy and smooth-working as you find in the most progressive works. The idealist chairman has even delegated to the council the power to make promotions: and it is their promotion of a foreman to a management post that causes the first ripple on the placid waters of Willerby Pressings Ltd. Through a series of seemingly trivial misunderstandings, the ripple swells into a violent storm. In spite of constitutional machinery for dealing with disputes, an unofficial strike closes down the factory.

Men at Work is not a social document; it is a humorous, absorbing, human story, which serves to remind us that men at work are really much the same as they are anywhere else; some are too quick to take offence, some too hungry for power; some are too timid, some too bold. It gives an authentic picture of a modern, progressive unit in which close and friendly relations exist between those who give orders and those who obey them. But the strongest ties of industrial relations, the author seems to imply, can be broken by the weaknesses of individual human nature.

What's My Line?

Theory and Practice of Psychological Testing. Frank S. Freeman. Pitman. 25s.

COVERS a wide and representative range of tests grouped so as to prove most useful to those interested in particular types or levels. Intended primarily for students—including those with no technical background in psychological testing—but also most useful to welfare officers, teachers and others who are practically concerned with these tests.

A chapter on "Statistics in Psychological Testing" is included, and the book is illustrated with tables, graphs, charts and photographs of actual tests.

Books in Brief

Forms of Public Control and Ownership. Edward Goodman. Christophers. 8s. 6d.

CLEAR and concise account of the growth and present-day extent of state ownership and control of industry.

The Youth Employment Service. H. Heginbotham. Methuen and Co. Ltd. 8s. 6d.

A reference book for employers and a textbook for entrants into the Youth Employment Service. Between the wars this service grew steadily in importance and established its own professional status and standards. Here is a comprehensive account of this development and of the legal and other factors governing the daily work of a Youth Employment Officer.

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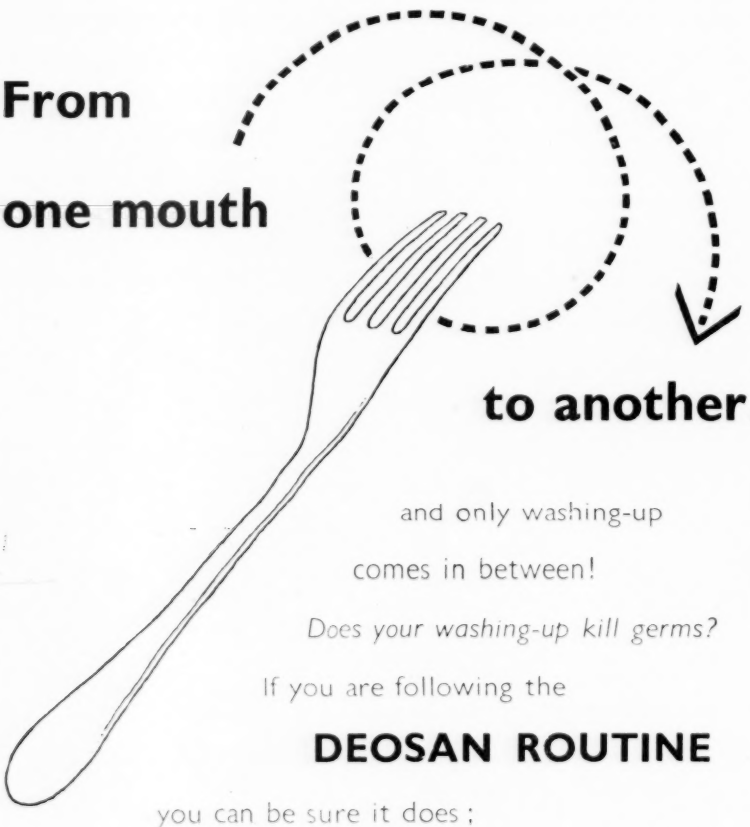

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New Industrial Equipment

EXECUTIVES' SURVEY OF AIDS TO INCREASED PRODUCTION

Readers who wish to have more particulars of any of the products referred to in this section are asked to write to the Editor, quoting the reference number which appears at the end of the paragraph.
We are always glad to receive details of new products suitable for description here, e.g., equipment that helps in any way to raise output.

LIGHTING

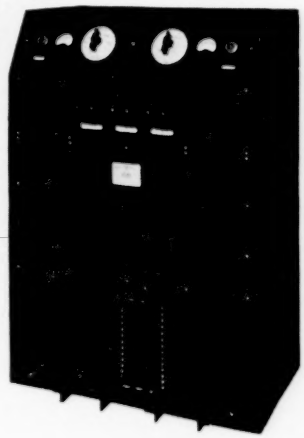
Emergency Light—Gas

THIS gas table standard has been produced as an answer to the power-cut problem. It takes a No. 2 or No. 3 size mantle, is 14 in. high, and is in metallic sprayed finish, with a globe carrier of polished aluminium. Frosted or clear glass globes can be supplied.

The same manufacturers produce an automatic switch for the control of gas emergency lighting systems. Its purpose is to ensure that, if the electricity supply fails, the gas lighting is immediately switched on. Modified connections enable it to be used as a safety device on gas-fired, forced draught furnaces. It cuts off the gas supply if the electricity supply to the fan fails. **(PM 443.)**

—and Electric

PURPOSE of the Ensur-a-lite is to provide emergency lighting in buildings where a total loss of light owing to cessation of the normal supply would cause not only inconvenience but danger. It comprises a lead-acid storage battery operating in conjuction with a high and low rate battery charger equipped with an automatic switch. The emergency lamps are fed from the mains through a step-down transformer, and at the same time the battery is trickle-charged. If



the supply is interrupted, the automatic switch immediately connects the emergency lamps to the battery, so that they continue to provide light.

If the emergency lamps are not required to be illuminated under normal conditions, the standard equipment can be modified accordingly. Similarly, the emergency circuit can be operated on a full mains voltage if required.

Charger and automatic gear are assembled in either a floor-mounting (see illustration) or wall-mounting sheet metal cabinet, and the battery is supplied complete with stands and all accessories. **(PM 444.)**

HEALTH

For Eye Testing

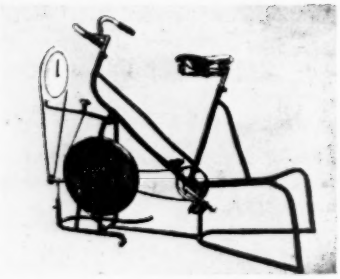
A NEW sight testing projector is particularly suitable for use in industry, for it employs reverse reading by means of a mirror screen—a method which halves the length of the room required for testing. The patient sits by the projector and looks at the image in the mirror. He is thus beside the oculist, instead of at the opposite end of the room.

The instrument consists of a projector mounted on a vertical pillar. The charts are photographed on a strip of 35 mm. film, which is threaded in the projector. The image is thrown upwards on to a mirror mounted at 45° to the light beam, and is reflected on the rear of a screen made of Celastoid plastic. Light source is a 12-volt lamp run via a transformer from A.C. mains.

A particular advantage of this method of sight testing is that a "V" and "blocks" can be used with it for comparison tests. Readings are taken against a protractor incorporated in the filmstrip. Strips with standard charts are available, but any special type of chart can be prepared. **(PM 445.)**

Orthopædic Cycle

A CHANGE from the conventional design can be seen in this static orthopædic cycle. The frame—designed to give complete stability, even on imperfect floors—is built on the same lines as that of a modern bicycle, and incorporates maximum strength with minimum weight. An unusual feature is the adjustable arm on the crank



unit; this gives a wide range of movement with the two arms independent of each other. This is, of course, essential for remedial work.

The flywheel, which has friction band resistance, is maintained in the ball-bearing races by housings which are slotted in order to keep the correct chain tension. A small distance indicator is fitted. **(PM/446.)**

SECURITY

Watchman's Clock

INCORPORATING improvements suggested by Scotland Yard, and designed to meet Ministry of Works requirements, this new model watchman's clock has an 8-day clock movement which does away with the job of winding-up at week-ends and during holidays. All winding can be done by the inspector previously. The keys do not require to be turned after insertion in the clock, and operate on a new principle which not only prevents the clock being stopped by holding the key against the rotating drum on which the tape unwinds, but also ensures that the key strikes the tape with a uniform pressure and gives a clear registration every time. Recordings from the different stations can be made in up to three different colours—black, red and purple.

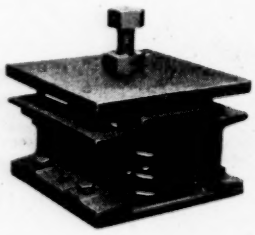
The calibrated tape is marked off by hours and portions of an hour, is easy to fix and remove, and provides a full week's record. It is designed to be easily and quickly torn off each day. Records can be left on the clock over a long holiday week-end. The apparatus is enclosed in a polished aluminium case, the whole being carried in a leather pouch, measuring 6¼ in. by 5 in. by 4 in. Weight complete, 6 lb. 12 oz. **(PM/447.)**

MAINTENANCE

Spring Insulators

THESE spring insulators, supplied in floor and pendulum patterns, are intended chiefly for isolating reciprocating engines and generating sets by absorbing vibration; but they are capable of wider application than that. For instance, fixed beneath a plastics tensile testing machine, they were so successful in absorbing the sudden shock which occurs at the moment of failure of the test piece that it became possible to place the machine next to a bench carrying delicate laboratory instruments.

The floor type insulator is inserted immediately beneath the base-plate of the machine; the pendulum type are used where it is necessary to suspend



the complete foundation block. Generally, the foundation block of single- or two-cylinder engined generating sets (diesel or petrol) on a combined base-plate has to be suspended and consequently requires pendulum insulators; with multi-cylinder engines it is often possible to use floor type insulators beneath the base-plate. Another application of the pendulum type is in the isolation of pneumatic power hammers, a relatively large concrete block being required to absorb the force of the blow. **(PM/448.)**

Spray Booth Protector

PULTAC is an "easy-peel" material which is applied to the dry walls of paint spray booths by brush or spray gun. Its purpose is to protect the walls, thus reducing maintenance and lowering operating costs. It can be removed at will by simply tearing off, thus eliminating the laborious process of periodic scraping down to remove paint overspray.

Non-inflammable, this material is resistant to thinners, has a water base and is expendable. Its application requires no special skill, a thorough cleaning of the surface beforehand being all that is necessary. It should be allowed two hours to dry.

(PM/449.)

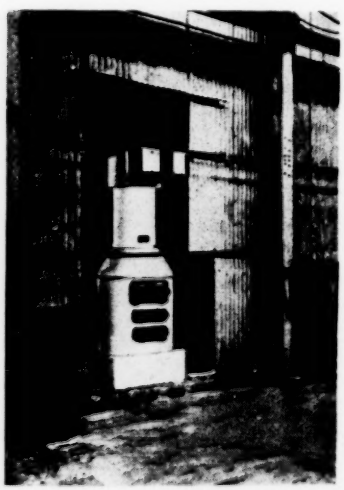
HEATING

Hot Air System

IN the Airheat system hot air is introduced into a building at high level, so that the roof area is first filled with hot air, which, as it cools, falls slowly and evenly throughout the building thereby causing draughtless but invigorating air movement. The units are so constructed that the warm air in the building can be filtered and recirculated, or fresh air can be introduced in any proportion to suit individual requirements.

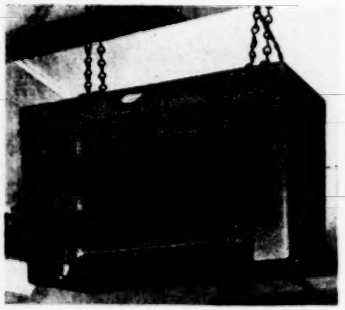
Normally three air changes per hour are allowed, which ensures speedy heat distribution, and as one unit, occupying 4 sq. ft., is capable of raising the temperature 25°-30° F. in a normal building of 90,000 c. ft., very little floor space is lost; more especially as the units are adaptable for either internal or external installation.

Made at present in two sizes for coke burning, having an output of 150,000 and 300,000 B.T.U.'s per hour respectively, these units consist of a double shell, the inner one being a combustion chamber, burning coke under natural draught, the gases from



which pass through a tubular heat exchanger, thence by a steel chimney stack to the atmosphere. A fan in the base draws air through filters, passes it between the combustion chamber, from which heat is absorbed, and the outer shell, and then over and around the tubes of the heat exchanger from which a high percentage of heat is taken. This warmed air is then passed through a distributor to the building requiring heat at a height sufficient to avoid striking personnel. One charge of coke will last for five hours at a thermal efficiency of 80°-85° F. For larger buildings more than one unit is necessary. These units can also be supplied with the necessary oil burning equipment to supply 350,000 B.T.U.'s per hour. **(PM/450.)**

Hanging Heater



THIS compact electric unit heater suspends from the ceiling and is particularly suitable for buildings where floor space cannot be provided for radiators, where neither steam nor hot water is available, or where it is inconvenient to install a boiler. It consists of a fan encased in a sheet metal casing, enamel finished, with a louvred front.

The heater has been developed especially for rapid warming up. The warmed air is discharged by the fan, thus tending to create quickly an even temperature throughout. The heater should, therefore, provide an answer to the problem of providing warmth in isolated or infrequently used buildings.

The air stream can be controlled by individual adjustment of the front louvres and a safety cut-out prevents the temperature rising beyond a predetermined level. If a short length of ductwork is connected with the outside air, the fan can be used separately for ventilation. The device is available in three standard loadings: 2.625 kw., 5.25 k.w. and 10.5 k.w. All models are convertible for use on single or three-phase. Two voltage bands are available: 230/250 v. single-phase and 400/440 v. three-phase; 200/220 v. single-phase and 346/380 v. three-phase. D.C. models can also be supplied. **(PM/451.)**

HANDLING

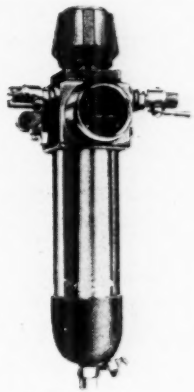
Piler and Spreader

UP to 80 tons per hour of loose material—sand, crushed stone, rubble, coal, lime, grain, etc—can be spread evenly over a floor area or formed into a pile with the aid of this mobile piler and spreader. Best results are obtained by feeding the material into the receiving hopper from a height of not less than 6 ft., so assisting it to attain the high speed of discharge. The thrower unit consists of a short, endless high-speed belt, mounted so that the carrying surface is held in a concave curve by idler discs on each edge. It is driven by a 3 h.p. electric motor through V belts. Total weight is about 7 cwt., and the machine can be moved by one man. **(PM/452.)**

Storage Wall

HERE is a storage wall which provides an efficient method of storing loose bulk materials. It is composed of independent, self-supporting units made of reinforced concrete and requiring no attachment either to each other or to the ground. When laid side by side on any level surface they will support materials loaded against either or both sides. Thus, a storage layout can be assembled and, when necessary, rearranged with the minimum of delay and trouble. Space is saved, storage capacity increased, and different sorts or grades of material are effectively separated. **(PM/453.)**

COMPRESSED AIR

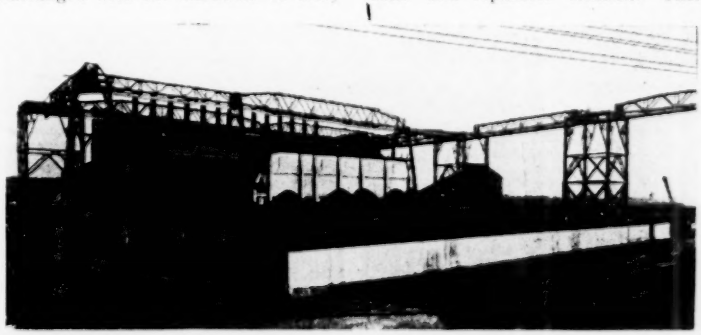


Clearing the Air

THIS air rectifier combines the functions of a compressed air cleaner and a reducing valve. It is designed to remove oil and water from high pressure air and to deliver dry, clean air at the pressure required in the production shop. It can be installed in air lines or branches to serve a group of tools or pieces of equipment: it may be used with up to three average size industrial spray guns and combinations of guns and tools consuming up to 25 c. ft. of air per minute.

Where it is necessary to deliver clean air without any reduction in pressure, this is done by means of a simple connection which bypasses the reducing valve. Normally, outlet pressure is controlled by rotation of a knob. A flush-mounted gauge records the pressure of the outgoing aiir.

Oil and moisture separation is effected in a brass cylinder fitted with filters and separator element. There



is a drain tap for water in the base.

Four models are made, two for pressures up to 120 lb. per sq. in., and two for pressures up to 200 lb. per sq. in.

(PM/454.)

WELFARE

Hand Cream Dispenser

WITH a die-cast aluminium alloy body, this robust dispenser delivers instantaneously an accurate

quantity of hand cream, etc., which can be preset to exactly the amount required. The operating knob at the base is pressed up by the palm of the hand, and cream is ejected into the hand when the knob is pulled down again; spring pressure is used in the case of automatic models for thin creams, cleansers and liquids.

Standard models have 2½ lb. and 4½ lb. approximate capacity respectively, and are wall-fixing, with cap locking device. Among non-standard types produced are multiple ejection dispensers for use on wash fountains, and tablet dispensers. The manufacturers state that they are interested in receiving enquiries for soap powder dispensers. **(PM/455.)**

Occupational Overgown

WOMEN in industry remain women at heart—and no woman can be truly happy when she is wearing heavy, shapeless overalls. Besides being often uncomfortable, such clothing is always unattractive. Here is an example of how this problem can be tackled with imagination. These combine charm with protective qualities, being tailor-made with a smart and stylish cut. The design incorporates roomy skirt pockets, detached belt, semi-fitted back and action-free, knife-pleated skirt.

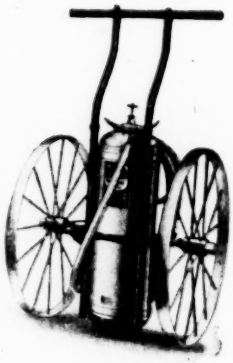
(PM/456.)

FIRE FIGHTING

Foam Engine

FIREFOAM output of the Challenger 34 gal. engine (for fighting oil fires) is approximately 350 gal.—more than ten times its solution capacity. The metering system of mixing the two solutions in measured quantities throughout the discharge period, rather than the dumping of the entire volume together at the start, is a valuable feature. Effective jet is 50 ft.

Three models are made, with identical bodies and operating characteristics. Model DM, illustrated, is particularly suitable for outdoor use; it is equipped with wider carriage and track than its stable companion, model FM, which has narrow track wheels to enable it to pass through doorways. Model AM



is mounted on an A frame for use in a fixed position. Each is supplied complete with 50 ft. of chemical hose. Wheel dia. is 4 ft. 2 in., clearance (hub to hub) 3 ft. 2 in. on model FM, and 4 ft. on model DM. Weights (charged): model AM, 780 lb.; FM, 880 lb; DM, 920 lb. **(PM/457.)**

Breathing Apparatus

A NEW self-contained compressed air breathing apparatus is designed on the open circuit system, i.e. the exhaled air is discharged to atmosphere and not purified and recirculated, as in the regenerative system. Valves and pressure gauge are easily accessible, and the wearer can readily see the state of his air supply. The alloy steel cylinder has a capacity of 1,200 litres of free air at a pressure of 120 atmospheres (1,800 lb. per sq. in.), and may therefore be said to have a life of approximately 25-75 minutes, according to the amount of work done by the wearer. Periodical inspection of the pressure gauge will indicate the contents of the cylinder.

Weight of the apparatus is 27 lb.

(*Picture on page 300.*)

(PM/458.)

Maintenance of P.V.C. Clothing

THE article "How to Save Money and Time in Repair of Protective Clothing," by John Spence, in our October issue, has aroused great interest and the booklet referred to therein, on the storage and cleansing of plastic clothing, has been much in demand.

This booklet is the copyright publication of James North and Sons Ltd., Godley Mills, Hyde, Cheshire, manufacturers of P.V.C. gloves and clothing for industrial protection. To save time, readers who wish to have a copy are advised to apply direct to Messrs. North. It would be appreciated if, when doing so, they would mention the name of this journal.

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Summary of Official Publications

READERS' GUIDE TO ACTS, STATUTORY ORDERS, NEW RULINGS AND AWARDS CONCERNING INDUSTRY AND PERSONNEL

BILLS

Pneumoconiosis and Byssinosis Benefit Bill. Dated November 27, 1951. Provides payment out of the Industrial Injuries Fund to or in respect of the people who were totally disabled or died as a result of these diseases, and were not previously insured. *H.M.S.O.* 6*d*.

STATUTORY INSTRUMENTS

No. 1889. The Hair, Bass and Fibre Wages Council (Great Britain) Wages Regulation Order, 1951. Dated October 31, 1951, made by Minister of Labour and National Service under Section 10, Wages Councils Act, 1945(c). *H.M.S.O.* 4*d*. (Revokes Orders H.B.(33) and H.B.(36) and fixes new statutory minimum remuneration payable. Operative from November 11, 1951.)

No. 1967. The Fur Wages Council (Great Britain) Wages Regulation (Amendment) (No. 2) Order, 1951. Dated November 16, 1951, made by Minister of Labour and National Service, under Section 10, Wages Councils Act, 1945(c). *H.M.S.O.* 2*d*. (Amends Part VII of the Schedule to Order Z.(49) by decreasing general minimum piece rates of workers employed on hand fleshing or beaming certain kinds of skins. Operative as from November 30, 1951.)

No. 1968. The Sugar Confectionery and Food Preserving Wages Council (Great Britain) Wages Regulation Order, 1951. Dated November 16, 1951, made by the Minister of Labour and National Service under Section 10, Wages Councils Act, 1945(c). *H.M.S.O.* 4*d*. (Revokes Orders F.(45) and F.(53) and fixes new statutory minimum remuneration payable. Operative from November 30, 1951.)

No. 1998. The Factories (Hours of Employment in Factories Using Electricity) Amendment Order, 1951. Dated November 20, 1951, made by the Minister of Labour and National Service under Regulation 59, Defence (General) Regulations, 1939, and certain Orders under the Supplies and Services Acts. *H.M.S.O.* 2*d*. (Amends the Factories (Hours of Employment in Factories using Electricity) Orders, 1947, and permits the Factory Inspector to issue a "certificate of permission" extending finishing time up to 10 p.m. one evening a week. Operative from November 20, 1951.)

No. 2011. The Milk Distributive Wages Council (Scotland) Wages Regulation Order, 1951. Dated November 21, 1951, made by Minister of Labour and National Service, under Section 10, Wages Councils Act, 1945(c). *H.M.S.O.* 4*d*. (Revokes Orders M.D.S.(49), (53) and (55), and fixes new statutory minimum remuneration payable. Repeats without alteration provisions for holidays. Operative from November 21, 1951.)

Draft. Police Pensions (Scotland) Regulations, 1951. Dated . . . . made by Secretary of State for Scotland, in conjunction with the Treasury, under Sections 1 and 3, Police Pensions Act, 1948(a), and Sections 43 and 44, Reserve and Auxiliary Forces (Protection of Civil Interests) Act, 1951(b). *H.M.S.O.* 6*d*. (Amend the Police Pensions (Scotland) Regulations, 1949, by assimilating in general the pension rights of all regular members who served temporarily in the Armed Forces to the rights of those who served in the 1939-45 War. Also amends certain provisions regarding widows' pensions and children's allowances. Operative from January 1, 1952.)

GENERAL

Accidents, How They Happen and How to Prevent Them. Issued by the Ministry of Labour and National Service, Factory Department. Vol. 9. (New series). October, 1951. *H.M.S.O.* 9*d*.

Sound Absorbent Treatments. Building Research Digest No. 36. Issued November, 1951. *H.M.S.O.* 3*d*.

Withdrawal of Roof Supports at Faces. Memorandum by Yorkshire Advisory Committee on Falls of Ground. Issued by the Ministry of Fuel and Power. Safety Pamphlet No. 24. *H.M.S.O.* 6*d*.

Medical Research Council Report, 1948-50. (Cmd. 8387.) *H.M.S.O.* 6*s*. 6*d*.

Pay and Organisation of Civil Service Medical Staffs. Issued by the Treasury, November, 1951. *H.M.S.O.* 9*d*.

Registered Trade Unions. Statistical Summary, 1940-1950. Issued by the Registry of Friendly Societies, October, 1951. *H.M.S.O.* 4*d*. (See also page 303.)

INDUSTRIAL COURT AWARDS

No. 2347. Road Haulage. Reference: Dispute over claim for increase of 3d. an hour for adults provided in Clause 2(a) of the Memorandum of Agreement, November 7, 1950, and for proportionate increases for juniors under Clause 2(b) of that agreement. Award: Increase of 2½d. per hour for adults, with proportionate increases for juniors. (31/10/51.)

No. 2348. Forestry. Reference: Claim for: (1) Amendment of Clause (1) of the Agreement on Wages and Conditions of Service of Forest Workers to delete reference to "minimum agricultural rate of pay" and substitute such figure as may be determined from time to time in accordance with agreed procedure; (2) for minimum rate of 115s. a week for ordinary labourers; (3) for normal working week of 44 hours. Award: In favour of item (1), but against items (2) and (3). (7/11/51.)

No. 2349. Printing Trade. Reference: Claim that basic weekly rate for night work shall be 25 per cent above basic weekly rate for day work, with consequential adjustments of overtime and jobbing rates for certain workers employed on certain morning newspapers. Award: Establishment of appropriate differentials based on current rates applicable to members of the National Society of Operative Printers and Assistants (other than machine managers) under agreements between the Society and the Newspaper Proprietors. (19/11/51.)

No. 2350. Printing Trade. Reference: Claim that basic weekly rate for night work shall be 25 per cent above basic weekly rate for day work, with consequential adjustments of overtime and jobbing rates, for certain workers in certain newspaper publishing departments. Award: Claim not established. (19/11/51.)

No. 2351. Reid and Sigrist Ltd. Reference: Dispute as to whether terms and conditions of employment should conform with the requirements of Section 15(1) of the Civil Aviation Act, 1949. Award: The Court found that the provisions of the Act did apply and awarded accordingly. (19/11/51.)

INDUSTRIAL DISPUTES TRIBUNAL AWARDS

No. 39. Claim for Payment for a Cancelled Matinee Engagement in Respect of Certain Musicians Employed at a Theatre at Middlesbrough. Claim: For payment for cancelled engagement. Award: Claim not established. (22/10/51.)

No. 40. Claim for Payment for an Extra Rehearsal in Respect of Certain Musicians Employed at a Theatre at Middlesbrough. Claim: For payment for extra rehearsal. Award: In favour of claim. (22/10/51.)

No. 41. Claim for Payment in Lieu of Notice in Respect of Certain Workers Employed as Sheeters and Erectors at Braidwood, Scotland. Claim: For payment in lieu of notice for four workers. Award: In favour of workmen. (22/10/51.)

No. 42. Remuneration of Workers in the Fletton Brick Industry. Claim: For increase of 3d. per hour on time rates, and equivalent increase for pieceworkers. Award: Increase of 1½d. per hour on time rates, with an equivalent increase for pieceworkers either as a flat rate payment or by adjustment of piecework rates. (23/10/51.)

No. 43. Rates of Wages and Conditions of Employment of Certain Canteen Workers Employed by an Aircraft Manufacturing Company at Hatfield, Hertfordshire. Claim: Dispute concerning application for a specific agreement for canteen staff. Award: Claim not established. (29/10/51.)

No. 44. Rates of Wages of Certain Workers Employed in the Corn Trade. Claim: For wage increase for mill and manual workers. Award: Increase of 12s. a week for adult workers. (30/10/51.)

No. 45. Wages, Annual Holidays and Overtime Payments in Respect of Workers Employed in the Flint Glass Making and Cutting Industry in the Stourbridge Area. Claim: For 10 per cent wage increase, increased overtime rates and an additional week's holiday with pay. Award: Basic rates for timeworkers to be increased 5 per cent, and piece rates adjusted to yield not less than 25 per cent above the appropriate revised basic time rate. In favour of claim for increased overtime rates and additional week's holiday. (30/10/51.)

No. 46. Remuneration of School Janitors Employed by the Renfrew County Council. Claim: For wage increase of 10s. a week. Award: Claim not established. (2/11/51.)

No. 47. Rates of Wages of Certain Workers Employed in the Roofing Felt Manufacturing Industry. Claim: For wage increase of 3d. per hour. Award: Minimum basic rate for adult male workers to be 2s. 6½d. per hour in the London area (within 15 miles radius of Charing Cross) and 2s. 5½d. in the rest of England, Wales and Scotland. (5/11/51.)

No. 48. Salary Scales of Clerical Staff Employed at the Head Office of a Friendly Society in Manchester. Claim: For improved salary scales. Award: Salary scales for basic grades of clerical workers to range from £2 5s. a week at 16 years to £6 at 29 for female workers, and from £6 10s. a week at 30 years to £8 10s. at 35 for male workers. The Tribunal referred back for negotiation the salaries of staff above the basic grades. (5/11/51.)

No. 49. Wage Rates of Certain Workers Employed in a Particular Section of the Clothing Industry. Claim: For wage increase of 3d. per hour. Award: Increase of 2d. per hour, provided no increase has been given since April 9, 1951; where an increase has been given, the award shall be reduced so that the total increase does not exceed 2d. per hour. (5/11/51.)

No. 50. Salary Scale and Insurance Cover for Pilots and Flying Instructors at Reserve and Basic Flying Training Schools. Claim: For specified salary scale and insurance cover. Award: For flying instructors, commencing salary £750 for six months; thereafter £850 rising by £50 a year to £1,050. Salaries for staff pilots, £50 a year less at all points in the scale. Insurance cover to be in the capital sum of £3,000. (8/11/51.)

No. 51. Remuneration of Certain Workers Employed by the Tyne Improvement Commission. Claim: For payment of a port rate of 6d. per hour in addition to district rates to ship workers employed on maintenance and repairs. Award: Current rates to be increased by 4d. per hour. (9/11/51.)

No. 52. Remuneration of Superintendents, Assistant Superintendents and Agents Employed by the Refuge Assurance Co. Ltd. Claim: For specific salary increases. Award: An increase of 5 per cent on current rates. (9/11/51.)

No. 53. Remuneration of Certain Workers Employed by a Firm of Retail Drapers, Outfitters and House Furnishers in Scotland. Claim: For agreement to provide a basic minimum wage of £4 4s. 6d. for takings up to £42 10s., with payment of commission at the rate of 9 per cent on all takings in excess of £42 10s. Award: Each male worker employed full time to receive total weekly remuneration of not less than £5 11s. (9/11/51.)

No. 54. Rates of Wages of Certain Workers Employed in the Baking Trade in Yorkshire. Claim: For minimum wage rates higher than those laid down by the Baking Wages Council Award. Wage increases of 1d. per hour above the current rates for male workers of 21 years and over; ½d. per hour for male workers 18 and under 21, and for female workers of 21 and over; ½d. per hour for male workers under 18 and for female workers under 21. (9/11/51.)

THE MONTH'S DATES

Bradford Industrial Safety and Welfare Association
January
9 "General Welfare." Salts (Saltaire) Ltd., Shipley. 7.30 p.m.

British Institute of Management
8 "Management Problems of a Retail Store." Sebastian Earle. London. 5.30 p.m.
29 "Training of Managers in a Large Concern." E. L. K. Frost. London. 5.30 p.m.

Chartered Institute of Secretaries
10 "The Nationalised Industries." W. F. Frank, M.Sc.(Econ.), B.Com., LL.B. Welbeck Hotel, Nottingham. 7.30 p.m.
23 "Company Organisation and Management." C. J. Howell, F.C.I.S. Chartered Accountants Hall, Spring Gardens, Manchester. 6.30 p.m.

Industrial Welfare Society
19-21 Conference for Works Managers. Palace Hotel, Buxton.

Institute of Industrial Administration
8 "Functions of Management." S. C. Tyrrell. Sheffield. 7.15 p.m. (In conjuction with the Institute of Cost and Works Accountants.
9 "Morale." W. B. D. Brown. Sheffield. 6.30 p.m. (In conjunction with the Institute of Personnel Management.)
10 "American Productivity Methods." F. Wright. Norwich. 7.30 p.m.
11 "International Industry—Canada and U.S.A." S. B. Hainsworth. Hull. 7.30 p.m.
12 Lecture. Gordon Newton. Cardiff. 7.15 p.m.
16 Case Study. F. E. Collins. Warrington. 7 p.m.
17 Brains Trust. Speakers: Sir Robert Wood, Rev. Porter-Goff, Miss Anne Shaw, Councillor Mrs. A. E. Oliver. Southsea. 6.30 p.m.
17 Lecture. The Earl of Verulam. Southampton. 7.30 p.m.
30 "Illustrated Case Study." F. J. Burns Morton. Leicester. 7 p.m.

Institute of Industrial Supervisors
15 American Supervisory Training Films. F. Scarborough, College of Technology, Suffolk Street, Birmingham 1. 7.30 p.m.
15 "Relationships Between Personnel Management and Supervision." Joint discussion with the Institute of Personnel Management. Canteen, Carpet Trades Ltd., Mill Street, Kidderminster. 7.30 p.m.
24 Industrial Film Show (including Motion Study films). Technical College, Rotherham. 7.30 p.m.
24 "Industrial Relations." Canteen, H. J. Elliot Ltd., Treforest. 7 p.m.
31 Industrial Film Show (including Motion Study films). Craven Arms Hotel, High Street, Coventry. 7.30 p.m.

Institute of Personnel Management
5 "Problems of National Service." One-day conference. Sheffield.
10 Discussion meeting for special groups. London.
13-18 "Employment and Welfare." Edinburgh.
14 "Tavistock Experiments." D. J. Clarkson. Glasgow.
16 "Human Relations in Industry." Parke Kirkwood. Edinburgh. 7.30 p.m.
17 "The Management Approach to Personnel Management." N. I. Bond-Williams. Wolverhampton. 6.30 p.m.
23 "Is Management Coming or Going?" Neville Whittaker. Leicester. 6.30 p.m.

Institution of Works Managers
2 "Management in a Research Organisation." C. Bailey. Grand Hotel, Bristol. 7.15 p.m. (Jointly with the Institute of Industrial Administration.)
3 "The Profession of Management." A. M. Hudson-Davies, O.B.E. Vane Arms Hotel, Stockton. 7.30 p.m.
8 "Management Practice in the U.S.A." E. Packer. Adelphi Hotel, Liverpool. 6.30 p.m.
8 "Management by Committee." H. J. H. Gillam. White Swan Hotel, Halifax. 7.30 p.m.
8 "Management in the U.S.A." J. C. W. Stead. Star and Garter Hotel, Wolverhampton. 7 p.m.
10 "Trade Unions and Management." C. V. Berridge, A.E.U. The Plough, Kenton Road, Kenton, Middlesex. 12.30 p.m.
17 "Management Research with Particular Reference to Work Study." T. U. Matthew. Franklins Gardens Hotel, Northampton. 7.30 p.m.
21 "Youth Training." W. G. Paterson, Ministry of Labour. Institution of Engineers and Shipbuilders in Scotland, 39 Elmbank Crescent, Glasgow, C.2. 7.15 p.m.
31 "Management and the Trade Unions." T. Birkett, T. & G.W.U., Waldorf Hotel, Aldwych, W.C.2. 6.45 p.m.

National Institute of Industrial Psychology
1-2 Course for Supervisors. (Production.) London.
4 Course in Selection Methods. London.
14-18 Course in Selection Methods. Birmingham.
14 Follow-up Conference for Supervisors. Birmingham.
15-16 Course for Supervisors. Birmingham.
17 Conference on Selection Methods. Birmingham.
28-Feb. 1 Course in Selection Methods. Liverpool.

THE INDUSTRIAL NURSE—*Continued from page 301*

Then there is lighting. The speed of moving machinery can easily be misjudged in poor light, and this misjudgment can cause accidents. At one time lighting was considered to be outside the scope of the industrial nurse, but nowadays she should, with suitable training, be capable of judging whether lighting is adequate and free from glare and shadow.

She must also be prepared to keep an eye on heating, ventilation and seating. If environmental conditions reduce fatigue, they will in turn reduce accidents; and the nurse can do much to ensure that they do.

Health Education. Education of the worker is one of the main functions of the industrial nurse. Talks are given in many firms to new groups of employees on health and safety, and in these talks new people can be made familiar with the health department, with the necessity of reporting of all accidents, and with any health problems of the factory. Individual health education is going on continuously in the health department.

Suitable clothing is a contribution to safety. Where uniform is worn, there is practically no difficulty in ensuring that workers are tidily dressed. Footwear is always a problem, especially among women. Many accidents are due to falls. Down-trodden high heels, open toes and sling-back shoes are a menace in the factory. Long untidy hair is another danger where there is machinery. A tidily dressed person will usually be a tidy worker. Such safety propaganda can be spread by the nurse during the course of treatment and, of course, by example.

Selection of Personnel. This needs the co-operation of personnel and health departments. Mental as well as physical capabilities should be taken into consideration. A repetitive job may be dull and uninteresting to one worker, whereas a complicated job may fluster another. Both can be equally frustrating and result in accidents. As to physical fitness, pre-placement examinations are becoming routine in an increasing number of firms where a full-time medical officer is employed. In other concerns, physical capabilities are assessed by the industrial nurse.

Training. Job instruction is strictly the responsibility of supervision, but the hazards may well be the department of the industrial nurse. Even though she has no statutory obligations, she is required to help the appointed factory doctor in certain duties connected with hazardous processes.

Records. The keeping of records—another of the nurse's responsibilities—brings out valuable information. Records can show:

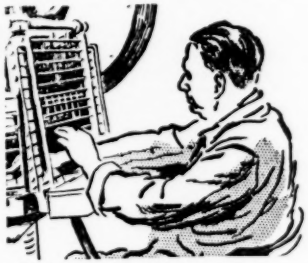
(1) Accident rates for each department. Any gross discrepancy between one department and another can then be investigated, individual accident rates assessed, and the "accident prone" given a safer job.

(2) The amount of time saved by treatment given on the spot. In our factory, time lost by injuries—and particularly sepsis—has been considerably reduced by an expansion of the health service.

(3) The state of health of the factory as compared with others in the same industry.

Finally, because she is in a good position for spotlighting unsafe practices, the industrial nurse can do useful work as a member of the factory's accident prevention committee.

Action for the Blind



Blind machinists and other engineering operatives are placed by N.I.B.

THE EXAMPLE shown above is typical of the many ways in which N.I.B. helps the blind to become useful, happy workers in industry or commerce. N.I.B. is grateful to the co-operating Personnel Managers, whose active interest has been a constant source of encouragement in this great service to the blind. Given the same valued support in the future, N.I.B. is confident that its activities on behalf of blind workers can be still further extended.

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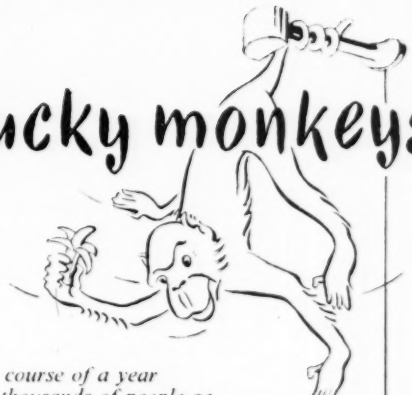
Lucky monkeys



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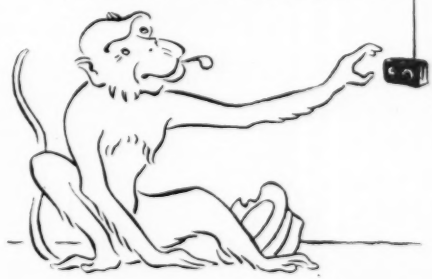

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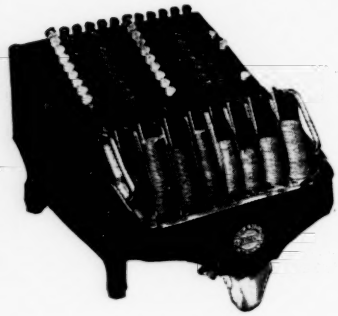
"INDUSTRIAL WELFARE OFFICER" 4/9 (p. free)

Have YOU considered the advantages of a CASH HANDLING MACHINE?



There are many models made for differing purposes such as

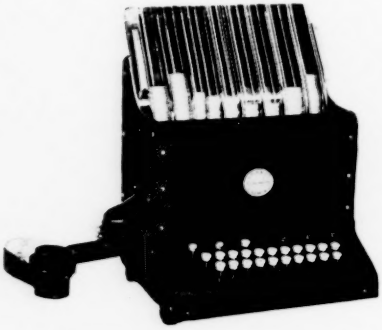
- **WAGES PAYING**
- **CHANGE GIVING**
- **DIVIDEND PAYING**

in fact for any place where cash must be handled quickly and accurately

WAGES PAYING MODEL

Keys ranging from ½d. to 9 11d.

All coins are loaded in the machine and when a desired amount is specified on the pay envelope or slip, the operator simply presses a key denoting that amount.



USE

BRANDT

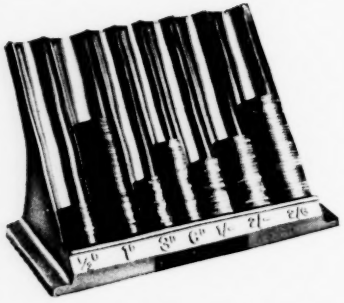
AUTOMATIC

Cashiers

with R.A.L. SERVICE

CHANGE-GIVING MODEL

THE "JUNIOR" is simplicity itself. With one finger the cashier presses the key for the change required and the money is instantly delivered to the customer in a delivery cup.



COIN HOLDER

This Coin Holder provides a means of holding coins conveniently arranged in channels. Designed for use in any place where change is made, or for payrolls of less than 100.

Send now for details of the equipment that interests you

R.A.L. LTD. *Service Agents for the Brandt Company (U.S.A.)*

41 FURNIVAL STREET, LONDON, E.C.4

Telephone: HOL 2179